The American Journal of

CLINICAL MEDICINE

Dependable Therapeutic Fact for Daily Use

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THE FLAG OF FREEDOM

When Freedom from her mountain height
Unfurled her standard to the air,
She tore the azure robe of night
And set the stars of glory there;
She mingled with its gorgeous dyes
The milky baldric of the skies,
And striped its pure, celestial white
With streakings of the morning light;
Then from his mansion in the sun
She called her eagle bearer down,
And gave into his mighty hand
The symbol of her chosen land.

—James Rodman Drake.

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The Power of Imagination

A DETAIL-MAN of my acquaintance recently called on a physician and asked him about his experience with a certain modern preparation that had been elaborated for, and found highly useful in, the treatment of septic wounds. The doctor declared that he had had no septic wounds to treat since receiving the sample and, therefore, could not express an opinion.

On visiting another physician, in an adjoining office, the detail-man was received most cordially, and the doctor launched into an animated relation of his splendid experiences with this same drug. Septic wounds? No, not any; but, there was a case of persistent leucorrhea that had cleared up beautifully. Then, used as a spray, the solution had reduced an angry pharyngeal catarrh in one case and aided greatly in relieving rhinitis in another. In short, this physician had found a great many different uses for this antiseptic and was full of praise for it. This doctor, be it said, incidentally, was far more successful than the former one. He used his imagination and set it to work, while the other did not, just taking things literally, limited by the printed letter without entering into the spirit of the thing. Not able or too indolent to give his imagination scope—since he had none—he was not over successful in his calling.

Henry Ward Beecher once declared that imagination is the secret and harrow of civilization, and, in the opinion of the first Napoleon, imagination rules the world. Beecher also said that the soul without imagination is what an observatory would be without a telescope.

Most certainly, imagination is the ferment that gives stimulus to new discoveries and to progress. Without imagination, the Pharaohs could not have erected their pyramids nor could the Egyptian hieroglyphics, nor, for that matter, the Assyrian cuneiform inscriptions, have been deciphered without it. If it had not been for a vivid, well-directed imagination, Hippocrates never could have left us those masterly descriptions in clinical medicine that arouse our admiration and deserve our appreciation to this day. Without imagination, Harvey never would have discovered the circulation of the blood nor would

Jenner have opened up the possibilities of the prevention of infectious diseases. Without imagination, Pasteur could not have accomplished his wonderful work in bacteriology; Koch could not have discovered the bacillus of tuberculosis. In short, all the fascinating discoveries and acquirements of bacteriology, immunology, and modern prevention would have been impossible.

It was imagination that aided Metchnikoff in evolving his ingenious theory of phagocytosis, which has opened up our understanding, not only for the processes of immunity and immunization, but, for so many other physiological happenings. And, to come down to the most recent times, it was the well-directed exercise of imagination, and a result of it, that made possible the remarkable work of Carrel and Dakin, through whose efforts so many wounded soldiers now are promptly being restored to health and renewed functioning power.

It hardly is conceivable how any progress whatever can be possible without the aid of the imagination. Imagination guided Bell in the discovery of the telephone, and Edison in his remarkable methods of employing and utilizing the electric force; it was responsible for the Brooklyn bridge, one of the wonders of its day, and for all notable accomplishments of engineers, architects and discoverers in every field.

So, it is not possible for a physician to practice his profession successfully without exercising imagination. As Dr. Hobart Amory Hare truly says, for the man with a dormant imagination or for the man who possesses no imagination, the practice of medicine or any other pursuit is an uphill road. Such a one leads a leaden existence, in narrow alleys in which the sunlight rarely falls. On the other hand, he who is endowed with a well-developed and well-controlled imagination walks in wide avenues filled with sunshine and fresh air. Imagination has made the pioneer physician, as also the American country doctor what he is. It has enabled a doctor in charge of a child sick with diphtheria to save his patient, while an unimaginative attendant would have let him die; the difference being that when, say, tracheotomy was urgently called for, but, suitable instruments were not to hand, the former nevertheless opened up the trachea and kept open the incision by means of a retractor fashioned out of a hairpin. Imagination has enabled many a country doctor to do many things in emergencies that would arouse the astonished admiration of their city colleagues. Imagination makes it possible for the true physician to lead a large, useful life, while his competitor, when devoid of it, grubs along in a rut.

I am quite sure that there have been few men that have done great things in the world who have not had a large power of imagination. For, if this gift be well controlled and subjected to reason, it is the "slave of the lamp." The late Doctor Trudeau declared that "in the innermost recesses of their ego, few physicians are entirely free from some degree of imagination and faith which they habitually quench and which, if cultivated, would at least broaden the sphere of their activities and make life less colorless."

If imagination, well controlled and conscientiously directed, has been responsible for the world's progress in sciences, arts, and the useful industries, it must not, though, be forgotten that imagination run astray or badly controlled is a potent source of evil. Such ill-directed imagination is responsible, for example, for what newspapers are pleased to refer to as the Russian fiasco. It accounts for the failure of Kerenski, of the Bolsheviki government, and of all the misguided Russian patriots who are attempting to put their utopian dreams—ill-conceived in themselves—into practice.

It may be said that well-directed imagination is a necessary condition for fair dealing to ourselves and to our fellow men and that a badly directed imagination is responsible for many of the human ills and human unhappiness and misunderstandings. Imagination is the secret of fair play, for, it means, to put oneself in the other fellow's place, judging him from his own standpoint and understanding his motives; in the words of the French proverb, to understand all, is, to forgive all.

It is owing to a faulty or misdirected imagination that we commit the mistake of judging others by our own limited personal standards; for this reason inevitably misjudging them. Worry, also, is possible only because of a straying, riotous imagination. The man who is happy only when he can make himself miserable worry-

ing about some supposititious possibility permits his imagination to run into evil ways and injures, not merely himself, but those who are compelled to live with him. In many patients, worry renders all the most faithful work of the physician illusory, because it destroys all the good that well-directed treatment otherwise would accomplish. Brooding and fretting over what might, or would be if things were different, never accomplished any good.

Physicians without imagination are prone to turn off the complaints of their patients with the contemptuous remark: "It's only your imagination," forgetting entirely that the man or woman who thinks that he or she is sick, actually is sick; forgetting also that, as a great French physician once said, imaginary diseases are not imagined diseases. Here, again, it is only the physician endowed with a well-developed and well-directed imagination who can enter into the psyche and into the mentality of his patients or is able to treat them successfully. It may be (and I am not at all sure that it is so) that in animals illness is purely a physical matter; yet, I read only recently that Charlie Chaplin's dog, which was left behind while the noted film-actor was touring the country in behalf of the third liberty loan, grieved so greatly about its absent master that it died. However, while in animals the physical probably overshadows the mental, in human patients, the disease-condition never is represented solely by physical abnormal functionings; but, it always is influenced very greatly by the mental attitude, the mental processes, and by the psyche of the patient. It is for this reason that an optimistic physician, with his well-controlled and well-directed power of imagination, will benefit so many neurasthenic and other patients, whose condition had been aggravated under the care of a former pessimistic medical attendant whose perverted imagination had caused the patient to become despondent, thereby preventing recovery.

Not only is imagination, if badly controlled, responsible for social and other ills, for anarchism and revolutions, for obstructive pacifism as well as blatant militarism, for extreme poverty as well as for excessive riches, but, it is responsible, also, for the unfavorable outcome of so many ailments that otherwise might terminate in recovery if directed and guided by a physician whose imagination is controlled by an optimistic attitude of mind, by a hopeful, well-balanced outlook upon life.

Thus, then, let us develop our imagination in the right direction; let us take care to control it rightly, remembering that the benefits accrue, not only to ourselves personally, in increased contentment and happiness, but, that our ability to do good will be increased thereby manifold.

In the history of man it has been very generally the case that when evils have grown insufferable they have touched the point of cure. —Chapin.

THE MEETING OF THE AMERICAN MEDICAL ASSOCIATION

On June 10 to 14, the American Medical Association will hold its annual session in Chicago, and we hope, on that occasion, to greet many of our friends in the beautiful city on the great lakes. We have often said that our latchstring is always out. For the period of the session, we shall discard even the latchstring and throw the doors wide open, hoping that you may find time, doctor, to run out to Ravenswood. Take a Ravenswood elevated train, on the Loop, get off at Ravenswood station, then walk one block east and two blocks north. You can't miss the two big buildings on the corner of Lawrence Avenue.

THE BUSINESS END OF IT

A salesman, whose work brings him into constant contact with physicians, wrote as follows in a recent letter to his manager:

"In general, I believe that the condition in any territory is just what the salesman makes it. If he is slack, his customers will be slack; on the other hand, if he gets them into the habit of paying, they think that it is the only way you do business, and as long as they buy goods from you they will continue to pay as you taught them. The same thing that is true of prices is true of collections. Get the reputation of being a price-cutter, and everybody wants you to cut the price; and, you get the reputation of being slack on collections, and your customers will be slack, as well.

"What is true of collections is true of doctors taking discounts; get them into the habit of taking advantage of our liberal discounts for cash, and the doctor who is the best pay will give you the money, and the reward the salesman gets for his effort in getting the money promptly is, that,

when making a call next time he knows that the doctor owes him nothing."

Is there anything for us to add? While this quotation refers to dealings between salesmen and physicians, the application to relations between physicians and their clients is obvious. The business side of the medical calling is neglected too much by those men who are most in need of financial returns for their work. As a class, we are absurdly lenient with our patients and are prone to accept any settlement that they choose to make. Accustom your patients to pay their bills promptly and they will stick far better than if they are permitted to owe you for long periods.

Experience is a safe light to walk by, and he is not a rash man who expects to succeed in future from the same means which have secured it in times past.
—Wendell Phillips.

THE DANGERS OF MENTAL STRAIN

Intellectual work does not injure health or shorten life, but, mental overwork, when associated with emotional strain, often is a cause of nervous breakdown and disease.

Health and life are sometimes lost through forgetfulness of the fact that mental strain is dangerous to those in or past middle life who attempt brainwork tc which they have not been accustomed.

If not subjected to excessive mental or physical strain, public and professional men, although afflicted with organic diseases, may live in comfort and do a moderate amount of work for many years.

Among physicians, lawyers, and journalists, the performance of brainwork under pressure for long periods and under bad conditions is a common cause of ill health.

Comparatively few clergymen succumb completely under mental overwork, although many of them suffer from a mild, annoying form of nervous exhaustion.

The danger to the scientific worker usually arises from too intense and prolonged activity of the mind in one direction. It springs largely from the fascination it has for its votaries.

Chronic nervous exhaustion is not common among men prominent in public affairs and in the professions. Such men, however, are sometimes the victims of a severe acute nervous prostration.

The warnings of mental overwork and overstrain vary, but, certain psychical symptoms are laxity or immobility of countenance, diminished resisting power; heart weakness, sleeplessness, cervico-occipital pain or distress and "dyspepsia" are of most frequent occurrence.

Insanity in some form is occasionally developed by overstrain of the nervous system.

Tuberculosis, diabetes, nephritis are among the diseases most likely to be aggravated by mental overwork. Men in whose families phthisis is hereditary should carefully guard against such overwork.

Overtaxing the mind and nervous system may be the exciting cause of almost any serious disorder to which chance, accident, imprudence or infection exposes the individual.

THE AMERICAN SOLDIER.

Europe seems to be on the verge of making a momentous discovery—the American. This fighting Yankee of ours is a distinct type, and it will be very difficult, indeed, for us, whom age or physical infirmity keep out of it, to avoid becoming very proud of him. We read of the American officer who, while on a raid in the German trenches, came upon a German officer. The American instantly covered him with the butt of his trusty riding-whip, compelling the German to surrender, then disarmed him and marched him to the rear, a prisoner. Then there was General Carey. True, he is not an American, but, surely, he ought to be. In their most recent advance, the Germans irrupted between the British and French armies. Carey hastily gathered together some two thousand nondescripts—engineers, stragglers, teamsters, even a bunch of Chinese laborers—armed them with any weapons that could be picked up, from rifles and machine-guns, to crowbars and pick-axes, and with this motley array, some relying even on their fists, held back the perfectly trained legions of Germany for two whole days, until the French could assemble their forces sufficient to stop the gap and hold the line. More power to Carey! We should like to honor ourselves by shaking hands with him. There is credit, surely, to a man who can succeeed with a well-appointed military force, but, what is that to such a deed as this of Carey's?

One characteristic of the American soldier that seems to surprise his European enemies is his good nature. The amazed

Germans remark that the American comes into battle laughing. Just so, the Spaniards at San Diego told that the American soldiers when charging, instead of trying to bayonet their enemies, endeavored to capture them with their hands!

The American does not have to be aroused to the requisite fighting-point by a course of bloodthirsty murder, rape, and destructiveness. He goes into battle for the love of the scrap. Moreover, the men who have fought through a football-match and after it was over sat down to a fraternal dinner with their whilom antagonists are not likely to feel very venomous toward men they are meeting in real battle. However, the unsportsmanlike conduct of the Germans is, they say, gradually engendering a personal hatred and contempt that may change all this in time.

But, after all, who is this American soldier, of whom we are talking? Here is the platoon turned out for the inspection of a group of French officers. The roll-call gives the names: Perkins, Grant, McGregor, Powell, O'Rourke, Skoglund, Anderson, Dombrowski, Orlof, Georgevitch, Scopek, Berteau, Apostolides, Pacella, Hovnanian, Gonzales, Pereira, and, yes, not to forget Wah Lee. The inspecting officer walks along the line with a perplexed expression until he comes to Berteau. The officer stops and says:

"You at least are French."

"No, my general, I am American."

"But, your name is French."

"Yes, my general, I was born in France and my parents still live in Loiret. But, I have been in America a number of years."

"Does that make you less a Frenchman?"

"No, my general, but, it makes me something more. You see, it's like this: because I am so intensely proud of my French nationality, I do my very best, that not one of this bunch shall excel me; and I think every one of them feels and acts the same way."

A growl of assent comes from the whole line. He proceeds:

"Besides that, every last one of them has something he can teach the rest, so that each one of us learns from all the others something that is of advantage to us and makes us better Americans."

"Yes," rejoins the general, "but, these people have been living for hundreds of years side by side in Europe, and no such amalgamation has taken place. How do you account for this?"

The soldier considers: "I can hardly reply to that, my general, but, I know this, that the day an immigrant lands in America, he is universally recognized as a newcomer and 'greenhorn'. The first thing we do is, to take him to get a shave and a hair cut. Then a suit of regular clothes, just like other people wear; and pretty soon we find him striving with all his might to be like the other Americans. It depends upon the man, of course, but, it isn't very long until you can't distinguish him from the rest. The place of his birth, of which he is not, by any means, ashamed, becomes a tradition to him. He doesn't accentuate it, but, tries earnestly to throw off the peculiarities that he brought with him."

And so it goes that these men, gathered from all parts of the habitable globe, are soon animated by the same spirit and are alike in their love for the land of equal opportunities, the country of a fair field, and no favorite.

The great blessings of mankind are within us, and within our reach, but we shut our eyes, and, like people in the dark, we fall foul upon the very thing we search for, without finding it. —Seneca.

DICHLORAMINE-T FOR WOUNDS AND BURNS.

After nearly three years of war, the majority of surgeons appear to be agreed upon two cardinal principles for the prevention and control of infection in wounds. In an unusually interesting paper contributed to *International Clinics* (1918, Vol. 1), Dr. W. Estell Lee declares the first of these factors to be the interval of time elapsed between the injury and the proper surgical treatment. The incidence and virulence of infection in gunshot wounds definitely increases with delayed surgical treatment; and, it is to be noted that this has been found certainly to be true for traumatic wounds in civil life. The second equally important factor is, the character of the primary treatment, it being essential that every effort be directed toward obtaining the earliest possible closure of wounds.

Doctor Lee insists, as we have pointed out repeatedly in these pages, that these surgical principles dictated by war experience can, and should, be applied in civil-life surgery. Indeed, their application, it is found, certainly has decreased to a large

extent the labor and time usually required to obtain healing of infected wounds. This becomes very clear when it is considered that, when the primary treatment was received within the first half hour after the injury, the average healing-time was six and one-half days, while, when this treatment was delayed (the average interval being six days), the period required for healing was twenty-eight and six-tenths days.

In substantiation of his conclusions, Doctor Lee discusses his experiences in a series of 27 cases of carbuncles, in which the method used and the results obtained are typical of the changes wrought by the newer surgical measures.

With the patient under a general anesthetic, deep crucial incisions are made through the carbuncle, down to the deep fascia. Arterial bleeding is arrested by means of ligatures, and from one to four gauze tampons saturated with a 5-percent solution of dichloramine-T in chlorinated paraffin-wax are firmly packed into the incisions, one in each limb of the star-shaped wound in the large carbuncle. Over this, is placed a light gauze dressing, which is changed when soiled.

In this manner, a large mass of germicide is brought in contact with the surface of infection. At the same time, the wounds are widely opened, to assure the necessary access of the germicide to the infection at subsequent dressings. The tampons are permitted to remain twenty-four hours, while in very large carbuncles repacking may be advisable. In areas under one square inch, the slough frequently separates during the first twenty-four hours. In larger areas, it has taken ten days.

At each daily dressing, the 5-percent solution of dichloramine-T is injected into every accessible channel by means of the glass pipette and syringe. As soon as the slough has entirely separated, daily bacterial counts are made, and when these have remained as low as one in five fields for three successive days, closure of the incision may be attempted. This closure is not difficult up to the twelfth day, while later approximation of the wound edges requires more or less tension, owing to the rapidly forming cicatricial tissue. This tension is a cause of reinfection and, hence, should be avoided whenever possible.

In the second part of his paper, Doctor Lee discusses the ideal dressing of burns, which has long been an *ignis fatuus*, for the reason that all methods available had their serious drawbacks, which interfered with ideal healing of the burns. In his most recent experience, he found that by exposure to the air, the latest mode of treatment may be greatly improved by adding an antiseptic to a single layer of mosquito-netting, which is made to cover the entire burned area and a generous portion of the surrounding skin, after having been previously impregnated with paraffin-wax.

Numerous experiments have shown that a pure paraffin, as well as the various modifications of the original French ambrine that are on the market, among them parresine, are not affected by prolonged soaking in dichloramine-T. It was found that a 1- or 2-percent solution of dichloramine-T dissolved in chlorinated paraffin-wax, after the method proposed by Dakin and Dunham, can be applied to burned surfaces without causing any objectionable subjective or objective irritative phenomena. This oily solution can be readily applied, in the form of a spray, to the entire burned surface before the paraffin-net dressing is laid on, and subsequently, through the meshes of the net onto the surface of the wound, if it is unnecessary to remove the dressing.

This modified air treatment of severe burns of the third degree has been employed in 55 cases, and because of the surprisingly small degree of infection occurring in these wounds they healed more promptly and with a more satisfactory scar than under any other method that the author heretofore had employed.

Hobbies should be wives, not mistresses. It will not do to have more than one at a time. One hobby leads you out of extravagance; a team of hobbies you cannot drive till you are rich enough to find corn for them all. Few men are rich enough for that.
—Bulwer-Lytton.

CANCER

A good deal has been said of late, in these pages, about cancer. But, really, what is there as well worthy of our consideration? This insidious malady is markedly on the increase. There are few, if any, of us but have grown serious over its inroads among not only our patrons, but—coming home more closely—among those who are near and dear to us. The conviction grows upon one, the more he studies this disease, that

there is scarcely anything so deserving the attention of the medical profession.

We have before us the "Campaign Notes of the American Society for the Control of Cancer," Vol. I, No. 1, dated January 15, 1918. This is a bulletin intended to be issued monthly for the information of everybody who can be reached. It tells of efforts to interest various associations, medical and otherwise, in this work. It is a most commendable movement. Those who have not received copies of the "Campaign Notes" should get in touch by applying to the national headquarters of the society, 25 West 45th Street, New York City.

Meanwhile, a promising lead seems to have been opened up by a Chicago doctor, Bertha Van Hoosen (*Woman's Med. Journ.*, Jan.). She seeks to fix the etiologic factor of carcinoma among the protozoa, and in this connection touches upon the known existence of "cancer-houses". After pointing out that during the two preceding years every carcinomatous patient coming to the clinic of the Cook County Hospital has been found to suffer from pyorrhea, she suggests that this, rather than the use of hot liquids, as inferred by Doctor Mayo, may account for the common location of cancer in the stomach, especially so in the case of men, who neglect their teeth far more than do women.

Beginning, therefore, with the ameba as an assumed cause, Doctor Van Hoosen has treated her cancer-patients with emetine. These are divided into three groups, comprising, first, those treated with emetine alone; second, those thus treated after operation; and, third, those beginning with emetine, undergoing operation, and again receiving emetine. Naturally, the third group seems to be the most promising.

Beginning with the ordinary doses of emetine, 1-2 grain hypodermically daily, Doctor Van Hoosen eventually arrived at the conclusion that from 4 to 8 grains, in 2-grain doses, daily must be taken. She asserts that 8 grains, of the alkaloid, given 2 grains every two hours, produces no dangerous or even uncomfortable symptoms in carcinomatous patients. The result is, a hardening of the fatty tissues, apparently due to fibrosis induced by the selective action of the emetine on carcinomatous tissue. In her list of 12 patients, are included 3 of sarcoma, in all of which the benefits correspond with those in carcinoma. A quotation from one case will illustrate the results Doctor Van Hoosen has been getting. "Adenocarcinoma filling the vagina, pronounced inoperable. Eighteen grains of emetine was injected during nine days. The hardening of the carcinomatous tissue made such a line of demarcation between the normal and diseased tissue that hysterectomy was undertaken and successfully performed. Three weeks after this operation, emetine was again given for three days—2-grain doses daily. The patient is well and shows no signs of return or ill health."

This lead seems too promising to be neglected. Unfortunately, the tendency of our profession is, to cut short any new method, rather than to conduct exhaustive investigations; and it seems more likely that the efforts of the profession, as a body, will be frittered away over a score of experimental methods, instead of being concentrated upon a single one that seems promising. Here is where a very objectionable personal element comes into play. For, if twenty distinguished surgeons are making such an investigation, each of the score would like to be the one to be honored as the original suggestor of the successful method, whereas there is small honor in helping to establish another man's theory.

Life is full of golden opportunities for doing what we do not want to do.

SELFISH INVALIDS

From the cradle to the grave, our life is, or should be, one series of struggles against self! The whole secret of a noble life is self-surrender, and, hard as is the prolonged battle against our selfish inclinations at all times, it is "when pain and anguish wring the brow" that the mocking friends of gloom and irritability and discontentment draw nearest. Then they come and sit beside our pillow, murmuring suggestions of evil. Then it is that our miserable "ego," with its aches and its pains and its restlessness, is prone to overwhelm the divine spark within us.

Now, every allowance should be made for the selfishness of the sick, and the nurse-professional or amateur must exercise great patience and gentleness with the sufferer in charge, bearing cheerfully and good-temperedly with the varying moods,

the depression, the irritability of the patient. But, then, this is not always an easy matter.

The invalid, too, has a duty, which is, to be considerate to his or her attendant. Granted that the nurse has taken up her profession (or volunteered for the post in an individual case) from motives of compassion, pity, and the desire to help the suffering, it will enable her to bear much without complaining. The patient, however, has it in his hands to lighten the burden very considerably. A smile and a word of thanks go a long way to reward a nurse for her exertions, cheering, strengthening and stimulating her to further efforts.

On the other hand, how discouraging are the fretfulness, the grumbling, the irritability of an invalid to one who is straining every nerve to bring about the patient's recovery and to enliven the monotony of his weary hours! Some sick persons seem to take a curious kind of pleasure in keeping their unfortunate attendants perpetually "on the trot." No sooner is one thing done and the nurse has returned to her seat, than the peevish voice demands yet another attention. This writer has known a captious patient to give her half a dozen orders in a breath, and scarcely had there been time to execute one before a torrent of abuse descended upon the luckless nurse, because, forsooth, one pair of hands (willing though they were) were unable to do the work of six!

The highest happiness is attained, not by those who grasp, but, by those who give. In sickness, as in health, this setting aside of self is a golden key with which we not alone solve many of life's hardest problems, but, also, open the door through which will enter two beautiful sisters, Joy and Peace.

Our own weaknesses we regard as misfortunes from which we cannot escape; the weaknesses of others we consider crimes.

EXERCISE AND PHYSIOLOGIC CHANGES

Voltaire once predicted that the end of all things would come when people take to reasoning. This crisis in our mundane affairs is, apparently, far distant, judging from the lacunæ of reasoning in many of our educated men and women. There is a daily increase in our knowledge, in our application of knowledge, and a vast improvement in the development of human individuality; but, in some matters relating to our physiologic existence, there is an absence of clear incised reasoning. This is particularly marked in the advice regarding exercise given to the middle-aged individual.

The man who has in early life been accustomed to athletic sports ceases regular exercise as the demands of a busy career consume his time. At forty-five years of age, he finds he does not sleep well, is irritable, suffers often from indigestion and headache, and retrospectively thinks of his happy adolescent days. His physician advises exercise, whereupon the unreasoning man starts out enthusiastically to try to get his muscles, heart, and lungs into the condition they were in when he was twenty-five years younger. His physician has failed to warn him that he does not now possess the resistive power he once had against undue strains or poisons.

The excessive exercise he at once undertakes causes his muscles to throw off a greater amount of toxic material than the blood can carry away. The result is some form of autointoxication, which will demonstrate itself in one of the various neuroses. The habits of the individual, overeating, use, and frequently abuse, of alcohol, as well as of tobacco, have produced changes in the neurons and nerve-centers that have also probably caused an unphysiologic decadence in their delicate life units. That this is so, is shown by the restless, uncomfortable condition exhibited when he is seeking advice. The neurons are already in a retractive, irritable state, and to increase this irritation by the surplusage of dead material thrown off by the excessive contraction of the muscles evinces want of reasoning powers.

The effects of stimulants and poisons on the nutrition as well as on the kinesthesia of nerve-cells are, certainly, different at different ages of life, and recklessly to plunge into violent exercise after middle life is, to invite a condition that will exhaust completely an already depleted nervous system. Also, men who are approaching the climacteric often are told they need more exercise, when, in truth, they need more rest, physiologic rest. Exercise, of a nonexciting, nonexcessive nature, is necessary throughout life; however, it should be adapted to the age, temperament, heredity,

and physiologic condition, and follow the immutable changes of the inevitable physiologic decadence.

THE VALUE OF BOOKS

The following editorial is reproduced literally from *American Medicine* (Sept.), for the reason that it is so true and also that it would not be possible to express it better than has been done here; nor do the remarks of our contemporary require any comment or confirmation:

As a form of education, relaxation, solace and inspiration, books are the noblest companions of thinking men. He who reads only works on medicine is narrowing his horizon and limiting his usefulness. He who devotes the largest part of his reading-hours to fiction prepares himself for social intercourses, secures mental relaxation, but, scarcely improves his working efficiency. He who, starting with medicine and hygienics, delves into the literature of education, science, sociology, economics, philosophy, essays, fine arts, poetry, drama, history, travel, and biography, broadens his horizon, widens his mental experiences, develops his latent thought-powers, and ideals, and makes himself a unit of society, potentially capable and fitted for useful service.

Reading for diversion brings rest; reading for information secures intellectual enjoyment; reading for comfort develops repose and solace. Reading for inspiration brings courage, stimulation, and power.

The physician, as a teacher, can not accomplish his best results without the companionship of books. The work of the world that is worth while is perpetuated in writing, that all may read. The libraries of physicians attest their interest in human affairs, their consciousness of the worth of human thought and activity. They are a bond index of the interests, enthusiasms, and characteristics of their owners. They are vitally serviceable in the expression of his personality and provide a helpful background of his public and private life.

AEROPLANE AMBULANCES

Newspapers and popular magazines have recently referred to the attempt, being made at the front, of utilizing aeroplanes for the rapid transportation of wounded. This idea is based upon the proposal of a French deputy, Doctor Chassaing, who was the first to specially fit up an aeroplane for this purpose. It has since been adopted and carried into execution in Italy also, at the suggestion by Dr. Ricardo Poncelli to the president of the Italian Red Cross Society. The General Commissary of aeronautics, in Italy, Mr. Chiesa, hopes shortly to inaugurate the new service of transport by air between the front and Milan or some other large hospital centers.

Commenting upon these facts, Dr. Henri Bouquet (*Monde méd.*, Apr.) remembers that the first one to suggest the utilization of aeroplanes for this purpose was a Dutchman, Doctor Le Mooy, in 1910. Two years later, Doctor Duchaussoy, professor in the medical school at Paris, urged the appointment of a commission to investigate the possibilities of this method. Trials were undertaken without, unfortunately, leading to satisfactory results, although the French Minister of War conceded that the aeroplane might prove useful in searching out wounded men on the battlefield.

Nevertheless, during the frightful retreat of the Serbian army, in 1915, the aeroplane, without any special fittings and under the pressure of absolute necessity, saved the lives of some thirteen wounded men who, rather than leave them in the hands of the Bulgarians, were transported from the interior of the country to Vallona, Scutari, Alessio, and St.-Jean de Medua. The resourceful ingenuity of certain aviators thus showed the practicability of the suggestion even under the most unfavorable conditions. It may be concluded confidently that the transport of wounded, by means of aeroplanes, is quite feasible; and, this mode of transportation has among others the great advantage of eliminating the excruciating pain often suffered by the wounded while being carried in ambulances, whether these be horsedrawn vehicles or motor cars.

We are quite able, while hating sin, to pity and be charitable to the sinner—when we happen to be the sinner concerned.

SANITATION AND MEDICAL PRACTICE IN TROPICAL COUNTRIES

It is a national characteristic of ours that we do things rather well, once our sincere interest is aroused; some say sneeringly: When our pocketbook is touched. That may be; and, if so, why not? If one is able to live comfortably, life is more likely to

be useful than if it is harried and made miserable by want. However that may be, it is certain that, when after the Spanish-American war, it became necessary, for us to occupy Havana, one of the oldtime pestholes of the Atlantic coast, means were found promptly to clean up the city, and surrounding country, so that Havana became one of the most sanitary and salubrious places of residence. When, some years later, it was up to us to carry into successful execution the old project of a Panama canal, it was very evident that the failure attending the earlier French attempt must be our portion also, unless suitable means were taken to make the Isthmus inhabitable for white people. That was done, and the Panama Zone now shows a morbidity and a mortality that compare very favorable with those of many regions in the temperate zone.

The sanitation of Havana, as also of some of our own southern cities, after the fascinating and wonderful investigation of Reed, Carroll, Lazear, Agramonte, and others, demonstrated that it is quite possible to make tropical countries safe for Caucasians to inhabit, incidentally diminishing the excessive morbidity and mortality of preventable diseases among the native populations. The means that were developed to this end within the memory of the present generation were utilized by business concerns having dealings with these countries, and the result is, that they have come to be, as they were intended, among the fairest places of residence on the inhabitable globe.

We are tempted to indulge in these cogitations by the perusal of a recent report (1917) issued by the Medical Department of the United Fruit Company, with main offices in Boston, Massachusetts, to the beautiful hospitals of which we referred in a prior article (Dec. 1917, page 923). This latest report makes very interesting reading, showing as it does what can be accomplished by careful sanitation and preventive medicine, and by appropriate treatment of actual disease. As is well known, the company operates a number of beautiful steamers, carrying both passengers and freight, the latter consisting mainly of the tropical fruits which it imports into the United States. Not only are the steamers themselves provided with unexceptional medical service and subject to the most careful sanitary and hygienic regulations, but, in their various branches and depots, the United Fruit Company conducts modern hospitals and dispensaries in which its many employes are cared for.

The results of the thoughtful care extended to the entire service speak for themselves. It certainly is a good showing when, in 28,925 cases of malaria treated during the year, the mortality was only 0.19 per cent, that is, far less than the death rate given by Stitt for this disease in temperate climates.

As to ankylostomiasis (hookworm disease), 1,250 cases are reported as coming under treatment for this as the primary infection, while it constituted a complicating factor in many others being treated for some other disease. It is interesting, however, to note that examinations of stools indicate a gradual diminution in the frequency of hookworm infection. While, in 1914, 18 percent of the stools examined for ankylostoma were found positive, in 1917 only 10.5 percent of positive examinations were recorded, the frequency having diminished gradually and steadily. All cases of hookworm disease are treated with chenopodium.

Amebic dysentery caused considerable morbidity, particularly in the Costa Rica and Santa Maria Divisions. Of 185 cases treated in the hospitals, only 4 terminated in death, being 2.16 percent. Undoubtedly, the report says, this is due to the method of treatment adopted, where emetine is used in the acute conditions followed by bismuth subnitrate in enormous doses.

Several epidemics of typhoid fever occurred, in the Cuban Divisions, due to conditions arising from the Cuban revolution when laborers by thousands flocked to the plantations and lived under very insanitary conditions. Neither the water nor the milk supply were found to be responsible for the transmission, but, this seemed rather to the traceable to carriers. The epidemics were controlled in each instance as soon as the source of infection was ascertained.

There are many other points of interest that we might mention. Suffice it to add that the Carrel-Dakin method of treatment of infected wounds has been adopted generally, by the medical officers of the company, and it is reported that the results have been exceedingly satisfactory; this method not only having saved a large number of lives, but, also prevented a number of amputations following traumatism.

Leading Articles

Dermatological Notes—I

Eczema

By A. RAVOGLI, M. D., Cincinnati, Ohio

EDITORIAL COMMENT.—It is with a good deal of satisfaction that we present to our readers this article on eczema, by so experienced a clinician as Doctor Ravogli. It is to be followed, soon, by a further one on the treatment of this annoying condition; and, we hope that the author may consent to contribute papers on the nature and treatment of other skin affections which cause so much trouble to the general practitioner.

ECZEMA, one of the most common of all the diseases of the skin, has been recognized in antiquity and so named from the Greek *ek,* out, and *zeo,* to boil, Latin, *effervescere.* We take up some considerations on this subject, not because we have anything new to say on this disease, but, only because it is not in general well recognized, is not justly valued in its entity, and is usually not treated rightly. As a consequence, the patients are frightened by the name of eczema, because they believe it to be the incurable systemic disease, which will trouble them all life long, and will probably be transmitted to the children—all of which is entirely wrong.

The most classic description of eczema was given by Ferdinand Hebra, and his definition was nothing more than a brief description of the disease. Indeed, Hebra, in elucidating eczema, started from the idea of a local inflammatory process of the papillary layer, resulting from the application of any irritating substance to the skin. From his experiment with croton-oil applied on the skin, he was able to bring together a group of symptoms which formerly had been considered separately. The authors before Hebra had described eczema from the predominating symptoms. Gorræus (1578), *"pustulæ ardentes et fervidæ, dolorem cientes citra saniem,"* made pustules the principal character of this disease. Willan gave a good description of eczema, as an eruption of clustered vesicles, noncontagious, which, after the absorption of the fluid contents, are changed into epidermic scales. The eruption can be produced from internal systemic conditions or from external irritations. Although he spoke of an eczema impetiginosum, he, yet, separated impetigo from eczema. He grouped together all traumatic dermatitides under the word of eczema, for the reason that vesicles were the prominent feature.

Hebra's Instructive Experiments

Hebra started from the idea of a local inflammatory process identical with the action of croton-oil on the skin, which he claimed to show the different varieties of eczema. When croton-oil is painted on the various regions of the body, it will show its effects after a few hours. On the penis and scrotum, a violent edematous swelling, red effusion, and small vesicles will make their appearance; on the face, milder swelling, redness, and discrete vesicles will mark the application; on the extremities, red papules and vesicles will occur. Left to itself, the inflammation will subside in a short time, the swelling disappear, and after a few days only a little pigmentation and a scaliness will mark the place where the inflammation had taken place. Hebra continued with the applications of the croton-oil to the already inflamed surface, and then the skin showed deeper-seated effects in the form of papular eruption; for, the exudation is not merely subepidermal, but, is present deep in the papillary layer. Yet, left to itself the skin will easily return to normal. If now, however, new applications are made,

the inflammatory process will extend much deeper, not remain limited, but, will spread along the surface of the skin that had not been touched by the croton-oil. The exudation will become so abundant as to detach the epidermis, which breaks and leaves the papillary layer denuded, excoriated, with serum oozing on the surface; in some vesicles, the serum will easily change into pus, and thus give rise to formation of true pustules. The serum mixed with pus and some blood, when exposed to the air, will dry up and cake upon the excoriated surface and form crusts that are more or less thick.

The inflammatory process with all its results, will, at first, produce an itching sensation, this gradually changing into a painful itching. The itching compels the patient to rub, thus increasing the irritation and the excoriations. The inflammatory symptoms gradually subside, the exudation diminishes, the crusts dry and finally fall off, leaving the new surface with a healthy epidermis, slightly infiltrated, red, and covered with epidermic cells.

In these experiments, Hebra found repeated the features of all the varieties of eczema—erythematosum, papulosum, vesiculosum, rubrum, impetiginosum, and crustosum. Furthermore, he failed to observe that painting the skin with croton-oil produced not an eczema, but, a dermatitis and which must be distinguished from eczema, for, when the applications of the croton-oil were continued, so that vesicles and then pustules and eventually red excoriated surfaces covered with crusts resulted, he had produced real eczema.

In our younger days, in the laboratory of the College of Medicine and Surgery (now many years defunct), we shaved the ears of several rabbits and then painted them with croton-oil. This produced an inflammation and little vesicles, which in five or six days had completely disappeared, leaving a little desquamation. One ear was left to heal up, the other ear was inoculated with a culture of staphylococcus pyogenes albus. This started pustules, crusts, and all the symptoms of eczema, which lasted for more than ten or twelve days. This observation gave us the firm conviction that eczema is caused by the presence of pus-cocci. In this same way, Hebra started a dermatitis with his croton-oil, but, by continuing the applications, deeper lesions were produced, which, infected with the ubiquitous staphylococci, turned into a true and real eczema.

Everybody has seen patients suffering from otitis media purulenta, who, having an abundant discharge from the ears, show eczema of the auricula of the concha and of the periauricular region. Often a recurrent eczema of these regions of the skin prompts the physician to look for the focus of infection, and this is found in the seropurulent accumulation in the middle ear. Eczema of the lips, at the angles of the mouth, is nothing but the result of pyorrhea from diseased gums. Eczema of the nostrils is the consequence of nasal catarrh.

Eczema Defined

Summing up, then, all these observations, we do not hesitate to define eczema as being a *catarrhal inflammation of the skin, produced by the action of pus-cocci.*

When a man exposed to very cold air has the mucous membranes of the respiratory tract inflamed, he has an acute attack of coryza, and in three or four days he will be well again. If, however, pus-cocci infect the irritated mucous membranes, then it no more is a simple coryza, but, it becomes a catarrhal rhinitis, pharyngitis, and so on; and will have an injurious effect on the general system and will take some time to become cured. Many other examples can be given of stubborn cases of eczema, which after awhile easily yield to treatment when the pus focus has been found and eradicated. Pruritus and eczema vulvæ can be treated for years with every kind of remedies without one's accomplishing anything. Then, after introducing the vaginal speculum, infection of the vagina or of the cervix is found, and then, when these conditions are treated, the eczema is easily cured. In men, eczema of the rectum, associated with unbearable itching, is usually the result of stricture of the urethra, of prostatitis, vesiculitis or of hemorrhoids. The seropurulent discharge on the skin causes the itching, the patient scratches, the pus-germs are inoculated, and thus the eczema is produced. Eczema of the perianal region, of the buttocks, and extending to the genitocrural region in children, always has as its cause diarrhea, an enterocolitis, with mucous discharge.

The spreading of the eczema over the surface of the skin does not militate against

our views. Since the skin is a continuous membrane, when it is irritated at one point, it is easy for the inflammatory process to spread along its surface. In fact, the eczema caused by professional occupations, such as the eczema of the hands from working in cement, soon affects the arms and often spreads to the face and neck. The skin, once irritated, is much more liable to be affected by the staphylococci, and these, though once innocuous, become pathogenic and then reproduce the disease.

In cases of diffused eczema, we often see furuncles, folliculitis, pustules, of the hair-follicles that are the production of a more virulent sort of pus-germs. Both the staphylococcus luteus and the citrinus, are found in the furuncles, a kind of cocci that often accompany the less virulent staphylococcus albus. When the pus-germs invade the funnel of the follicle of the hair, suppuration is produced, in the form of a pustule having a hair in the center. Folliculitis of the upper lip often accompanies eczema of the nostrils.

Eczema, in some instances, has an acute course; mostly, it is chronic. Many cases not only are stubborn to the treatment, but, when nearly healed up, have a tendence to relapse. The eczema mercuriale (so-called by Willan, because produced by mercurial applications or by other irritating substances, e. g. arnica, irritating plasters, etc.) was separated by Rayer from true eczema. These inflammatory processes of the skin, as produced by irritating substances, are merely dermatitides, and they heal up easily and in a short time, in remarkable contrast with true eczema, which by nature is chronic and resistant to treatment.

Regional Eczema

Rayer was the first to study eczema of the different regions, or regional eczema. The difference of the symptoms in the different parts of the body sometimes makes difficult the diagnosis, and this gave origin to the peculiar terminology applied by the older dermatologists to the same disease eczema in different parts of the body (Porigines, impetigines, etc.).

It must not be forgotten that eczema is, at times, acute, while more often it shows stubborn chronicity. The old idea of the presence of vesicles as pathognomonic of eczema was gradually set aside, and Devergie comprehended the symptoms of eczema as redness, itching sensation, serous discharge, and *état ponctue* — eczema rubrum. The idea of a diathesis as a factor of eczema was discarded, the *eczème dartreux* and *eczème arthritique* of Bazin and Hardy were found to be predicated only on a vague theory, as vague as is today that of the rheumatic and arthritic diathesis. In general, those affected by eczema are in good health, scarcely ten percent of all the patients being found suffering from other diseases. For Bazin, eczema is only a vesicular eruption, from a reaction of the skin to some internal or external irritation.

In a general way, we can not disagree with the view of Hebra, so far as it concerns the clinical symptoms of eczema. We have often remarked that Hebra, by means of the application of croton-oil on the skin, produced a dermatitis, and not an eczema. With the successive applications, he changed dermatitis into eczema, on account of the lesions being invaded by the pus-producing germs. In this way, he confused dermatitis and eczema, and also eczema impetiginosum and impetigo.

Rayer had already described the regional eczema of a chronic form, as affecting different regions of the skin, and had already separated the artificial inflammatory process of those skin affections, which Willan had grouped together with eczema. It seems that the symptom of the vesicle is nearly inseparable from the syndrome of eczema, and Bazin always maintained that, although in an acute eczema vesicles can not be seen, yet, with a magnifying glass or by oblique light, small miliary vesicles can be seen on the surface of the inflamed skin. The presence of small vesicles in acute eczema was considered a pathognomonic symptom by Hebra, who pointed them out for differential diagnosis between acute eczema and erysipelas.

Eczema may affect anybody at any age and in any part of the body, as a peculiar polymorphous affection. Eczema is changeable in its appearance, and quite often it would suggest the idea that it represents, not the same disease, but, a group of diseases.

The Symptoms

Although the experiment by Hebra with croton-oil tends to confuse dermatitis with eczema, yet, it explains the symptoms of eczema clearly, and especially for the gen-

eral practitioner it gives a good idea of the symptoms of this disease.

After painting the skin with croton-oil, a diffused redness of the skin occurs, with swelling, and, studded with small miliary vesicles scarcely perceptible with naked eye, erythematous eczema. The vesicles soon break and a quantity of serum oozes out, which, clear at first, gradually becomes turbid and sticks to the linen—eczema madidans, *seeping eczema*. Repeating the application of the croton-oil, under a stronger inflammation, the deeper layers of the skin are affected and small nodules are formed, papules clustered together. They often are changed into small vesicles, which surmount the papula, and by scratching they become excoriated and covered with crusts. In some parts of the body not much exposed, as the chest, shoulders, abdomen, they remain as small reddish papules, forming the variety of papular eczema.

In some cases, the papules are changed into small vesicles, which after awhile are covered with scales or scaly crusts, according to the quality and quantity of the exuded serum. When the cuticle has been detached from the lower layers of the epidermis and rubbed off by the clothes or by the finger-nails, a red raw surface is left, showing the red papillæ, discharging abundant serum — eczema rubrum — *état ponctue*. At this point, the eczema is very troublesome and when extensive compels the patient to remain in bed. At this period, the eczema may be covered with thick yellow crusts and take on the appearance of eczema impetiginosum. In this case, the serum discharging from the abraded surface is mixed with pus and the crusts are thick and yellow-brown in color.

When the epidermis has been distended by the edema and swelling of the tissues of the derma, and these begin to return to normal, the epidermis is no more capable of covering the surface, and forms a kind of dry shreds, called scales, desquamation. The size of the scales is from branlike to that of horny lamellæ. In some cases, eczema has never shown vesicles, but has begun as a red surface covered with dry scales. The epidermis has lost its elasticity and under the scales cracks and fissures are formed, which sometimes may bleed. Nobody can deny a squamous eczema, where the predominant symptom is the formation of scales, as it is seen in eczema of the fingers and of the palms of the hands. In our view, the scales are secondary to the inflammatory process, as a necrobiosis of the epidermic cells.

Eczema is always accompanied with an itching sensation—a subjective symptom not exclusive to this disease. It is very intense and compels the patient to scratch and rub, so increasing the irritation and the lesions of the skin. The exudation between the papillary layer and the epidermis is the cause of the itching. At any new eruption of vesicles, the itching is greatly intensified. In cases of dry eczema, squamous eczema, where the skin is thickened, hardened, and cracked, itching is present. The exudation from fissures moistens and macerates the epidermis in the folds of the skin, which causes the itching. Unbearable itching is caused by the eczema of the scrotum, when the skin is red, hard, swollen, edematous, partially covered with scales and innumerable cracks, the patient being prevented from sleeping. The finger-nails voluntarily or involuntarily are used freely, digging excoriations, which only increase the irritation. Oozing of serum takes place, and this increases the sufferings by producing a dermatitis on top of the eczema.

Eczema may be acute, and recurring in type. Acute eczema is not easily differentiated from dermatitis, but, yet, when recurring, without there being an external irritating cause, and possibly caused by purulent foci, it is diagnosed as acute eczema. The feature on which Hebra so much insisted was, the diffused redness, the presence of small vesicles, and the oozing of serum. Eczema, however, in most of the cases, is chronic in type; the tendency to chronicity being one of the characteristics of the disease. Chronic eczema often is subject to reacutization, so much so in many cases, that, when we think to have brought it to recovery, then, either from dietetic errors or from inopportune local application, it starts all over again as a fresh acute eczema.

We consider eczema an inflammatory process of the skin, mostly chronic in type, of parasitary origin, revealed by redness, swelling, with small papules and vesicles clustered together, originating oozing of serous secretion, with excoriations, formation of crusts and scales, accompanied in all its stages by an itching sensation.

The Medical Practitioner and Cancer

What Should the Medical Practitioner Do about Cancer?

By L. DUNCAN BULKLEY, A. M., M. D., New York City
Senior Physician to the New York Skin and Cancer Hospital

EDITORIAL COMMENT.—In his numerous publications on cancer, Doctor Bulkley sounds an encouraging note, for the reason that he affords a guide for the recognition of cancer disease before hopelessly inoperable lesions have developed. More, by opposing indiscriminate surgical interference, and outlining the means for successful treatment, the author renders a great service to physicians and patients alike. The cancer problem is one of the most important ones before the medical profession. Its careful study will be repaid manifold.

THE answer to the question, "What should the medical practitioner do about cancer?" in accordance with modern custom, seems plain, namely, "Leave it to the surgeon." But, why, and is this really the correct thing to do? Or, shall the disease be left to the advertising quacks?

It is now pretty generally believed by the medical profession and the laity that surgery offers the only hope in cancer. However, I hope to show that real cancer, other than epithelioma of the skin—on which latter so many of the arguments for surgery are based—is a medical rather than a surgical disease, and that with proper and prolonged dietary and medical treatment the results are far better than from surgical intervention. Careful medical attention must be given to the disease if we ever hope to diminish the distressing increase in its morbidity and mortality, as I have many times tried to show.

The reasons why the medical profession and the laity have so universally accepted the dictum that cancer belongs to the domain of surgery are not difficult to discern.

The medical profession, being occupied largely with acute disease, with apparently definite and speedy results, very naturally became discouraged by the unsatisfactory course commonly opened in cancer; as was the case in regard to tuberculosis, until the revival of interest in the latter in recent years, with the well-known beneficial consequences, to be considered later.

Then the surgeons took up the treatment of cancer, and, as the wounds generally healed well after excision and the immediate results of the operation seemed favorable, little thought seems to have been given to the constant recurrence in subsequent years, for, unfavorable statistics are seldom published.

By the brilliant advances in modern surgery along many lines, the laity have become so obsessed by the idea that in many directions its possibilities are limitless that the cancer-patients have constantly yielded themselves to the knife, in the face of the steadily rising mortality of late years. The glamor of surgery and its often spectacular results have quite blinded the eyes of many to real facts.

The enormous accomplishments with the microscope with reference to the minute structure of the diseased tissues and the elaborate and extensive work done in animal experimentation, together with the expressed opinion of many laboratory-workers, that cancer is a local disease only requiring early extirpation, have turned the thoughts of many away from the homely and practical studies of the human frame in its various departures from health. In this way, relatively little attention has been given to its biochemistry and the deranged activities of the various organs. We have also studied too little the perverted metabolism resulting from the stress and strain of modern life, together with the temptations as to eating and drinking that accompany the present intensity of present-day civilization.

Cancer being left to the surgeons, it is hardly to be expected that they would incline to any other treatment than that with the knife. Nor would one expect that the surgeon would think along medical lines and investigate metabolic conditions, when the immediate results of operations seem, often, to be so satisfactory. Neither would one expect the surgeon to seek from statistics the unfavorable aspects of this line of treatment, but, rather, those from which he could draw encouragement in trying to overcome so dire a disease.

It is to be observed, however, that of late years even the surgeons have extended the time after which cancer can be said to be cured, from a former two

years limit, to three, five or more years, while some are candid enough to say that no definite period can be set, for, often recurrences have been observed ten, fifteen or twenty years after surgical removal. This agrees entirely with the more rational view of regarding cancer as a constitutional, metabolic disease, which may manifest itself anywhere and at any time, whenever the systemic conditions of the individual are suitable for a new development of the malignant newgrowth to be generated.

What, then, should the general practitioner do with reference to cancer?

Deaths from Tuberculosis and Cancer Compared

Let us look for a moment as to what proper medical, dietary, and hygienic treatment has done for tuberculosis, despite the persistence of tubercle-bacilli in affected subjects.

In 1900, in the registration area of the United States, 201.9 persons out of each 100,000 population died of tuberculosis. In 1916, under careful medical guidance, the number of these deaths had fallen to 141.6, or a decrease of 60.3 persons per 100,000; in other words, 29.86, or almost 30, percent.

Now, during the same period, the recorded deaths from cancer had *risen*, under active surgical care, from 63 per 100,000 population, to 81.8, or 29.84 percent —almost exactly the same percentage that deaths from tuberculosis had *fallen*. Thus the death rates of the two diseases have approached each other with an amazing regularity almost 60 percent, so that, while in 1900 they were 139.9 points apart, in 1916, they were only 59.8 points apart; at this rate of increase of cancer deaths and decrease in the deaths from tuberculosis, the former will soon claim more victims per 100,000 population than the latter.

It may be interesting here to mention the latest information in regard to the cancer death rate in New York City, as obtained by a study of the actual figures furnished by the local board of health in its weekly reports. During 1917, there were 4,589 deaths recorded from cancer in New York City (2,143 males and 2,716 females). This total number divided by 365 days gives an average of 13.33 persons dying daily from thise cause in New York City! During 1916, there were 4,635 deaths from cancer, or, an average of 12.68 persons per day. Further: in the year 1917, there was a total of 78,467 deaths from all causes in Greater New York, against 77,948 in 1916—an increase of 516, or less than *one* percent—whereas the increase of cancer deaths was 224, or over *four and one-half* (4.5) percent.

What, then, I again ask, should the general practitioner do in regard to cancer?

Evidently, he should not pursue a plan of treatment that shows a steadily increasing mortality, so that now it is about agreed that 90 per cent of those once affected with cancer die from it! This would not be tolerated in any other disease.

It is high time, indeed, for the medical man to take up earnestly the study of cancer in its medical relations and to seek to understand its cause and to seek to rectify the systemic errors that lead to the formation of heterologous, malignant tissue, or tumors, instead of to the homologous tissues of health.

Cancer a Phenomenon of Perverted Metabolism

The limits of this article do not allow of a discussion of the real nature and cause of cancer and its medical treatment, which have been pretty fully presented elsewhere[1], but, a few practical suggestions may not be out of place.

All nutrition, good and bad, comes from the food and drink taken. Under normal conditions, the cells of the various tissues of the body are continually subjected to *katabolism*, "a breaking down of complex bodies of living matter into waste products of simple chemical composition," and *anabolism*, or "the process of assimilation of nutritive matter and its conversion into living substance"; these together constituting *metabolism*. In effecting these metabolic changes in the system, the various secretory and excretory organs of the body, including the ductless glands, each perform a certain part, and in health the final results are carried off by the lungs, kidneys, bowels, and skin, in an orderly manner.

In various chronic disorders of the system, from different causes, including errors in eating and drinking, there is some disturbance in the operation of some of the organs, with an altered blood current, and there result various derangements in the tissues, to which derangements we

[1]Bulkley: "Cancer, Its Cause and Treatment," vols. 1 and 2. P. B. Hoeber, New York.

apply, respectively, the names of different diseases, one of these being cancer.

Cancer is simply the misgrowth of epithelial cells, such as had previously been normally produced—as all pathologists agree. Microscopic studies have demonstrated that within the cells the earliest cancer-genetic change is found in a certain disturbance in the polarity of the cells; also in the relation of the centrosome to the nucleus, whereby the cells multiply, by a deranged karyokinesis, in an irregular, luxurious, and riotous manner, this resulting in what is known as cancer.

Why or just when certain cells begin to take on this heterologous action has not been determined: for, no one has ever seen and recognized the very beginnings of the malignant process in true, internal cancer, any more than has been seen and recognized the first inflammatory change in the tissue of the gouty toe, and the like. Suffice to say that there must be a cause; and this has been well defined as a subcatabolism, induced by hyperacidity or oxydase deficiency in the surrounding medium or blood plasma, especially through the agency of the myeloid leukocytes, which contain a ferment of the oxydase variety.

All this speculation, though, and much more that has been advanced, really helps us very little in explaining the true pathogenesis of cancer; still, it has its practical bearing with regard to the prophylaxis and treatment of the disease. For, oxydase has the property of deamidizing, that is, destroying amidoacids, or the nitrogenous elements, which have been found by many observers to be at fault in cancer-patients.

This leads us to the subject of the influence of the nitrogenous diet in the production of cancer, which I have previously shown, statistically, clinically, experimentally, and analytically, to be a predominating element in the causation of this malady. Several observers have confirmed the existence of a faulty splitting of nitrogenous elements and an increase of amino-acid nitrogen in those afflicted with cancer.

In view of all this, once more, what should the medical practitioner do with regard to cancer? Of course, it is readily seen that the mere excision of the particular local lesion which has developed somewhere never can eradicate the systemic error that produced it and which probably will cause a recurrence: nor can the x-rays or radium-treatments be expected to effect such a change.

All surgeons agree that about 50 percent of the cases are inoperable when first seen by them. Of the remaining 50 percent few claim more than 25 percent permanent cure of the general run of cases, excluding those of skin-cancer. This makes only 12.5 percent of the total number of cases of true cancer, or about 90 percent of deaths, when we consider the number of cases lost sight of or with late recurrences.

It would be quite impossible here to indicate the exact lines of treatment, dietetic, medicinal, local, and so on, that the medical practitioner should pursue, and which have been more or less detailed elsewhere.

As the surgeons have been so strenuous of late on insisting on the early recognition and treatment of cancerous lesions, so as to medical treatment the best results can, undoubtedly, be secured by the earliest possible detection of the disease. As patients recognize that they can escape the knife and that there is a far greater expectation of cure by means of proper and prolonged medical treatment, they will be less inclined to hide the trouble until too late, and it can be more easily overcome by proper medical care.

People, therefore, should be encouraged to report any questionable signs of the disease at the earliest possible moment, and the case should be minutely investigated and active treatment begun at once, and continued even long after all tangible signs have disappeared for some time. For, the dietary and other proper measures looking toward the correction of the faulty metabolism leading to the disease are harmless and often beneficial to those who may not have cancer. In advanced and even inoperable cases, very active treatment may often be of the greatest service, as I have elsewhere shown.

Impressions of Military Medical Service in the U. S.—III

By MILES MEDICUS, Somewhere in Camp

IT MAY be asserted with confidence that the outcome of the present war will be decided by psychic factors. The first dash of the enormously strong and well-prepared German army might have been successful, from purely material force. But, its strength and preparedness was the result of psychic factors operating for nearly two generations, while the weakness and unpreparedness, in varying degrees, of the antagonists likewise were psychic. The case was, on a large scale, exactly the same as if a neighbor cleaned and loaded his revolver while we looked on with friendly interest over the back fence and as if he actually told us he was going to shoot us or one or two of the other neighbors.

According to the modest expressions of some French officers, Germany's failure to win in the first dash also was due to psychic factors, and not so much to the heroism of inferior or at least less prepared forces as to the psychic factor of overconfidence which led the Germans to delay closing in on Paris, in order to allow the crown prince or the emperor himself to be present, and, during which delay, as it is asserted, the good French wine reduced the efficiency of the German troops. At the present time, psychic factors alone may be said to continue the war, whether we view the matter from the German or the Entente standpoint.

Officers, Snobbish and Otherwise

It may be pardonable, therefore, to consider various minor illustrations of the psychic makeup of the men in our army. The distinctions of rank obviously are necessary in the maintaining of discipline, or, at least, they are so considered by everyone who knows anything about military matters, and men in a few weeks after leaving civil life take to them naturally. Still, there is a sensible and a silly way of carrying these distinctions into practice. For example:

The writer's commanding officer is a strict disciplinarian, but, he will not take a chair from a subordinate and he dislikes anything approaching deference to rank at mess or in social gatherings. Some officers of not very exalted rank rather expect privates to give them seats in street-cars and picture-shows, when others, urged to accept such courtesies to rank, refuse, on the ground that it would be a species of graft. At a public table, one officer ignored a private, while another treated him with the same courtesy that he accorded to any other chance companion. It turned out that the private was far ahead of that supercilious officer, both in table-manners, education, and even in certain matters that it might be considered snobbish to mention. As for the snubbed private, he had been barred from an officers' training camp on account of a minor physical defect; he had tried to enlist and had been rejected; and partly by his own efforts to improve his physical condition, partly because of a gradual reduction of standards of requirements, he was, on the third attempt, allowed to enlist as a private.

There are ways that do not transgress the necessary rule against undue familiarity between officers and privates or between officers of different rank and that nevertheless allow a very friendly feeling to grow up. To mention personal experience, the writer has found generals and colonels very affable either as patients or at social gatherings and the sole discourtesy that he could even imagine (and that was not so obvious as to compel notice) has come from one of the same rank as his own, and rather doubtful seniority.

One of the bitterest complaints by surgeons of former wars has been their lack of authority to enforce sanitary regulations and the personal discourtesy shown them by line-officers, at least to the degree of insisting upon using the title of doctor instead of the military one. All this may be said to have been done away with. So far as the cantonment with which the writer is connected is concerned, it may be said that the commanding general and his staff not only back up, but, would, if necessary, jack up the surgical staff. Line-officers

generally take an interest in sanitation, request the intervention of medical officers to correct every manner of sanitary defects, not only through military channels, but, whenever they encounter them.

To a surprising degree, the rank and file of the army show the same spirit of intelligent cooperation, even when their education and previous occupation would seem to render them incapable of understanding such matters. As part of the policy of fair play to all men in the army, any patient leaving a hospital is entitled to file a complaint. The only complaint of which the writer has had personal knowledge was a criticism as to the lack of individual drinking-cups—a defect fully realized and due to the impossibility of securing, without delay, everything needed.

The Salute

It should be stated, however, that the strictly personal equation enters into the psychology of military life. One finds even amateurs anxious to courtmartial men for every slightest infringement of rules, while others will try to avoid making trouble for their associates and inferiors and prefer to discipline by admonition and an appeal to a sense of duty and patriotism. One young surgeon, for example, says that he gets more salutes when wearing his overcoat, which indicates his rank, but, does not show to what branch of the service he belongs. A captain claims that when he is wearing his slicker so that only his hat-cord and puttees indicate that he is some kind of officer—the chances being three to one that he is a lieutenant—he gets fewer salutes than when his rank is evident. Others discover no difference. Some privates consider the salute a degradation and avoid it whenever possible, under the excuse that they are working, that their hands are full or that it is too dark to see. Others rightly regard it as a sign of comradeship and realize that even the obligation of saluting first applies to themselves no more than to officers, except in a percentage sense.

However, much depends upon the attitude of the officers. Prompt acknowledgment of a salute, the removal of a cigar before returning the salute of a private accompanied by a lady, a friendly expression of the face, an avoidance of places where privates are resting, so as to save them the trouble of springing to attention and saluting, a word or smile in acknowledgment of a salute requiring the shifting of a burden or of a crutch or when the salute is made with a bandaged hand, all this goes quite as far as reiterated orders for securing universal courtesy in military form. One officer told of seeing a young lieutenant actually return a private's salute by bringing his thumb to his nose. Hospital patients are rather prone to take advantage of their status, to avoid salutes. One officer put it to such a man in this way: "Are you here under guard?" "No, sir." "Then you are not a prisoner who is not allowed to salute, but, a soldier in good standing, who is *privileged* to salute."

The Problem of Feigned Disability

While the general courage and morale of the army are excellent, the surgeon is rather likely to be impressed with the exceptions. It often is difficult to distinguish between actual cowardice and mere selfishness which prefers civilian life, with its comforts and ease and freedom, to the exactly opposite conditions of military service. Rather unjustly, since the draft has been announced as a fair method of levying a kind of government tax, a drafted man assigned to a regular-army or national-guard organization often has a hard time; yet, it does not appear that the national army is deficient in the military spirit, and gradually the prejudice against the drafted individual passes if he attends to his duties. Line-officers, rather than surgeons, have had the opportunity of observing the development of individuals and bodies of men, from cowardly or at least unwilling soldiers, into those filled with a proper spirit.

On the other hand, the surgeon has, perhaps, the better opportunity of diagnosing the psychology of the individual in regard to these psychic factors. Often the line-officer is convinced of the physical inability of a soldier, when the surgeon is equally convinced that the man is a malingerer, or, the line-officer or the man's companions believe him to be a skulker, when the surgeon knows that his incapacity is real. For example, one of the best-behaved and most helpful patients, who had been retained in the hospital for a long time because of a carious bone, was much distressed at the rumor that his tent-mates considered him a coward. This man begged for any kind of radical operation that would hurry him to recovery.

Malingering may be plain or it may be subconscious, taking the form of a hysteric

lameness or psychic suffering or it may actually pass to the stage of mental alienation. The persistent malingerer can always win out in the end. Perhaps with the idea of excluding malingerers, the army does not recognize "muscular rheumatism" as a proper diagnosis, yet, its reality in civil practice scarcely is questioned. There is no accepted method of judging as to the existence of pain in another individual, especially when the ordinary accepted reasons for pain are not clearly present. Here is a case: an officer, while awaiting the call to active service in warm weather and blessed with every home comfort, suffered from a localized pain for weeks and, so, feared that this would incapacitate him. He accepted the call, said nothing of his condition at the time, and then, when subjected to the hardships of military life in cold weather, became completely relieved. Turn the case around, and one can judge of the helplessness of the surgeon as to expressing a positive opinion, one that would pass in a court martial or before a board of inquiry.

A good many men enter the army without pleading exemption for physical causes, some honestly expecting to experience relief from the condition, others carried away by temporary enthusiasm. Under the grind of drill, the expected relief may not occur or the enthusiasm may be supplanted by the overwhelming desire to get out of the army again. Who can tell? Men have had themselves patched up in all sorts of ways, at great expense and suffering, in order to enter the army, others are willing to take advantage of any preexisting abnormally or genuine acquired exacerbation or fresh development or to hypothecate a disease, in order to get out. Each case must be judged by itself.

One sees men bitterly disappointed at being discharged for heart lesions, chronic renal lesions, incipient tuberculosis, and the like. On the other hand, comparatively minor lesions are magnified in the patient's complaints, to secure discharge. One of the most amusing things is, to see a man fourflushing when he has a "full house". In plain words, not realizing that he has some condition necessarily demanding his discharge from the army, such a one fabricates the flimsiest imaginary physical or mental defect. From entirely different sources, the writer has heard the following story—told as true—of a private and of a surgeon at an instruction camp. The man went about the camp picking up and eagerly scrutinizing pieces of paper, until everyone was convinced of his mental deficiency. When he secured his surgeon's certificate of disability, he shamelessly laughed at his victims and said, "That's the paper I was looking for."

In some instances, one is reminded of what fire-insurance men call the moral hazard. For example: Orthostatic albuminuria,hemolytic jaundice, certain anomalies of bony development, painless flat foot, and many other conditions may lead the surgeon to favor a discharge, because, without any actual need of so doing, the individual can at any time present evidence that he ought to be discharged. It obviously is better to discharge such a person before much time and money has been spent upon training and transporting him to the front. The course of action may, however, at the discretion of the surgeon, be governed by the psychic standard of the man himself. The army is, practically, at the mercy of any man who has had his appendix removed. Such a person can always claim to be suffering pain, describe the symptons of typhlitis, vomit or induce diarrhea by food or drugs taken, or simulate it by frequent visits to the latrine. So, too, almost anyone can vomit or by gagging and hawking even can spit blood. Nor are many persons, especially when exposed to the vicissitudes of weather and to the necessarily somewhat crude diet of army-life, entirely free from colds of some sort or from digestive disturbances.

Doubt as to Enforced Operation.

It is doubtful whether the rule that a soldier must submit to a necessary operation can be enforced, especially when the administration of an anesthetic or even a capital operation itself certainly does involve an element of danger that a conscientious surgeon would admit or that a court-martial or board of inquiry would have to accept as legally established. But, even if the operation be insisted upon, the problem is only postponed.

As a matter of fact, no one is absolutely in perfect health, and the man who really wants to get out of the army can succeed by perseverance. It must also be remembered that many men, perfectly able to engage in civil pursuits, especially those that are mainly sedentary, without presenting actual disease, are at the time of enlist-

ment physically unable to perform the manual labor and endure the fatigue of the various drills, especially the double-time ones. Young men may lack the general stamina to acquire the circulatory, respiratory, and muscular strength required and older men are, probably, unable to undergo the histologic changes necessary. Yet, even in this regard, there is much malingering as well as much failure to make good, without there being actual malingering. In other words, the psychic element is important.

Importance of the Psychic Element

Granted that a man is not really a malingerer, is anxious or at least willing to serve in a military capacity, but, in some special form of work not involving great strain and hardship, there are two diverse solutions of the problem, both well supported in theory. One way is, to adapt each man to a special form of work, agreeable to him and within his mental and physical capacity, and to keep him at that work. The other is, to have every man in the army physically, mentally, and volitionally or by compulsion ready to do any form of drill or other duty required of the average soldier—this theory, of course, not extending to recognized experts, such as electricians, mechanics of high grade, surgeons, dentists, and such like. At present, the weight of authority leans strongly toward the latter theory; and this somewhat increases the responsibility of the military surgeon, as he has to deal, not only with the malingerer who wants to get out of the army altogether, but, with the man who wishes to escape routine drill, while willing or at least saying he is willing to perform some special form of duty.

Contrary to the writer's expectation, there seems to be little trouble in regard to malingering from a class of men who, while possibly longing for the excitement of warfare at the front, would seek escape from prolonged service in camps in this country. This does not mean that the malingerer is, necessarily, a coward or that men generally are contented to stay indefinitely in cantonments, but, means merely that no appreciable number of cases indicate a sharp differentiation between cowardice and tedium. There is one potential case of this sort in which the writer has had considerable opportunity to study the psychology; that is, his own. Fortunately, this subject, while very anxious to go across, and, yet, for purely personal reasons preferring, as he does, civil life to that in a cantonment—means to stick it out.

Seriously, it has sometimes seemed that it might be worth the trouble of transfer and special arrangements for transportation to put it up to every man who spends much time in the hospital and asks to be excused from drill, and who does not present well-defined disease, that he can go across just as soon as trains and ships can carry him. This would clarify the atmosphere in a good many puzzling conditions.

Some of the most interesting and paradoxic cases are those coming under the scope of the psychiatry-boards. One of the big credits against the cost of the war is, the actual knowledge of the nature and number of these cases. It is, of course, disconcerting to realize that one percent of our young men are mentally below par, that the smug suggestion, that the war be fought by men who were out of jobs, cannot be carried out, because to a large extent the men who do not hold their jobs are mentally deficient, that the country must protect and help this part of its population. Still, it is always worth while to know the truth, however disagreeable.

Of course, the neurologic service does not confine itself to the Binet phase of psychiatry, for, it detects, also, a surprising number of atypic epileptics, the kind of men who would be shot for sleeping at their posts, moral imbeciles, men of various types of insanity, often unsuspected, victims of rare organic lesions or anomalies and of late manifestations of syphilis. This service gets the subconscious malingerers, those who have frightened themselves into various manifestations of hysteria. Perhaps a special subdivision should be made of the men who have, more or less voluntarily at the beginning, acquired some peculiar gait, impossible of explanation on the ground of sparing a strain of any part of the locomotive apparatus, but, on the contrary, fatiguing and tending to produce strains of joints, and even ultimate deformity in extreme cases. So well known is this subdivision that, if you see an officer limping and ask the reason, the chances are he, instead of admitting a

corn or a bruise or sprain, will make a joke of his misfortune and tell you that he is practicing an S. C. D. (surgeon's certificate of disability) gait.

One not especially familiar with psychiatry and accustomed to use such words as an expert and one skilled in comparison with very high standards is, at first, surprised to learn that a considerable number of soldiers have the mental development of such low-age standards that they scarcely can count, make change, take care of themselves or learn the comparatively simple evolutions of the drill. On the other hand, there are even greater surprises in the opposite direction. One of the best-behaved patients—courteous, intelligent on superficial acquaintance, intensely patriotic, a noncommissioned officer by his own merit—is markedly deficient mentally. A company commander, informed that what is popularly termed the "nut board" had discharged one of his sergeants, as having the mentality of a boy of but twelve years or under, indignantly declared that the man was the most valuable in his company. Cases of this general nature are not very rare. When one remembers his own childhood, and the intense interest in playing soldier and even in drilling, with a fair degree of accuracy, that it involved, one is tempted to suggest that a juvenile mentality may, after all, not be a valid reason for excluding men from the lower ranks. If practically these men make good soldiers, that is the main point. For this reason, the very sensible rule has been made, that defectives having a mental rating of over twelve years, by a standard similar to that of Binet, may be retained.

Without reference to hysteria and without accepting anything approaching Christian Science, military as well as civil medical experience emphasizes the very real influence of psychic conditions over the physical. The rapidity of recovery, the yielding to given degrees of physical incapacity, even to infections, seem to depend quite closely upon the patient's volition.

One surgeon, in speaking of the high disease incidence, especially epidemics of exanthemata, in his cantonment, verified the observation repeatedly made in recent years as to the lower stamina of persons from the country districts. This conception is entirely at variance with opinions long held and fostered by school readers, but, is backed up by health statistics, in many instances. To a large degree, the particular susceptibility to infections by soldiers from the country is explained by the immunity—possibly without actual occurrence of detectable infection—acquired by residence in cities, but, this surgeon also emphasized the mental state of his rural troops and mentioned especially that one could scarcely ever get them to take a humorous view of anything or to show anything more than a logy indifference to events.

Observations on Rectal and Fractional Narcosis

By E. H. F. PIRKNER, A. M., M. D., New York City

[*Concluded from May issue, page 369.*]

How the Isopral Enema Acts

THE infusion of the 40 mils (1½ ozs.) of the compound isopral-liquid can be done in twenty minutes and should not require more than forty-five minutes. Of 15 patients, 2 felt the effect distinctly twenty-five minutes after the infusion was started, 2 after thirty minutes, 8 after thirty-five minutes, 1 after forty and 1 after sixty minutes. They said that they felt very sleepy and soon after fell soundly asleep.

One very large, powerful woman did not fall asleep forty-five minutes after injecting 75 mils of the compound isopral liquid (equal to 7.5 Grams, or 120 grains of the pure drug); which may have been caused by injecting too quickly (in fifteen minutes).

But, 12 drops of chloroform put her to sleep in seven more minutes, and it required only 2 drams (8 mils) of chloroform to keep her asleep for twelve minutes—in which time a retroglandular abscess of a mastitis was incised, thoroughly scraped, and packed.

One frail, delicate, and anemic woman of 27 years complained that she tasted the drug ten minutes after the rectal infusion

had been started, and fell asleep in thirty-five minutes. Another patient out of the 35 mentioned, tasted the isopral eight minutes after infusion began and said that she began to feel drowsy.

In case No. 16, I gave 12 grains of isopral, in tablets, by mouth, and began to inject rectally 33 mils of the solution twenty minutes later. It took fifty minutes altogether to put her asleep after she had received 4-5 plus 3 1-5 Grams (equal to 64 grains) of isopral.

All the patients remained soundly asleep from three to five hours, nothing disturbing the work, which is sufficient encouragement to employ this method for major operations.

In a child 4 years old (case 17), 30 mils of the solution produced deep narcosis and rendered a tracheotomy easy. Similar good results were obtained in cases of removal of adenoids (cases 18 and 19) of children 4 and 5 years old; one operation for mastoiditis (No. 20) following middle-ear disease, and one, in an 8-year old (No. 21), for congenital unilateral hernia. A man of 38 years (No. 22) received 75 mils (equal to 120 grains) of isopral solution for herniotomia inguinalis directa (Bassini), this lasting one hour.

Case 23, one of a Douglas' abscess, broad incision through the posterior vaginal wall, dilating the incision with an especially constructed dilator and effecting drainage, progressed without difficulty under 60 mils of the isopral solution administered by rectum. Case 24, one of two submucous uterine myomata about walnut-size, enucleated after splitting the cervix and uterus in the anterior median line, required one slow infusion (forty minutes) of 60 mils of the isopral solution. Cases 25 to 36—curettage of the uterus—received from 4 to 5 Grams of isopral by the rectal method. Both went to sleep in about thirty-five minutes, with an average time of operating of seven minutes.

All these cases were done in the morning at my office and the patients were sent to their respective homes in the evening, without making any complications whatever.

One woman, not in this series, 25 years old, in general good condition, received an overdose of the narcotic, 80 mils of the solution being injected thirty minutes after a cleansing enema. Her condition (bartholinitis dextra, large abscess) was so painful that I considered the large dose indicated. Her pulse was ordinarily 78 and of good quality. At 8:45 a. m., infusion was begun, and at 9 the pulse rose to 114. At 9:15, she was in deep coma, but, I continued operating and finished in forty minutes. The cyst was completely excised. However, operation was not begun before 10 a. m., as the patient appeared to remain in a condition to cause us anxiety. Her breathing was 30 per minute, labored and stertorous, although regular; the pulse maintained a regular rate of 110, of good quality, but bounding. The pupils were at maximal contraction and did not react to light, the conjunctival and corneal reflexes were extinct. The operation was performed between 10 to 10:30 o'clock. At 11:20, a hypodermic injection of 1-30 grain of strychnine improved the respiration; the rate being 26 at 12 noon. At 11:35, the pupils showed maximal dilation; no reflexes had returned. At 12 o'clock, the pupils were of average dilation and reacted to light, the pulse stood at 78, and the patient began to take notice. After that, we let her sleep for five more hours.

To contrast, I present an average case. The patient, a delicate woman of dark complexion, age 27, 120 pounds, anemic, was put to sleep for a bimanual examination, this revealing a left ovarian cyst the size of a small apple, apparently benign. At 11 a. m. (rectum prepared twenty-four hours before), she received 45 mils of the compound isopral solution, given per rectum. At 11:05, pulse 90, good quality. At 11:08, drowsy and at 11:35, asleep. At 11:45, pulse 72, respiration 12; pupils medium size, corneal reflexes extinct, conjunctival reflexes present. At 1:15 p. m., pupils of maximal contraction, no pupillary reflex, but, slow conjunctival reflex upon touching the eyelid; no corneal reflex. At 2:30, patient distinguished white from red; all reflexes had returned; was sleepy. At 3 p. m., pulse 72, facial expression stultified, patient tried to sit up, but, fell back on the pillow. At 4 p. m., patient got up and walked. At 5 p. m., she received some hot malted milk and retained it. At 6 p. m., she took tea and toast, which she relished. The next day at 9 a. m., she took breakfast, with great appetite; had no complaints, no headache.

Of all of the 37 cases previously described, only one, an anemic woman who

had been suffering for several weeks from secondary hemorrhages after abortion, complained the day after curettage of headache and feeling somewhat weak, but, this passed off and she made an uneventful recovery within four days. She had received 4 Grams of isopral. The operation was done in her home.

Fractional Narcosis

When my clinical observations with chemicals designed to accelerate general anesthesia were in an experimental stage, I combined isopral or barbital-sodium given by mouth with hypodermic injections of morphine and inhalation of chloroform, and, later, isopral per rectum, with morphine hypodermically and chloroform by inhalation; giving each drug separately time to take effect and to observe the symptoms. On an average it required one hour for anesthesia to take place and before beginning to operate. I call this fractional narcosis. Comparing these experiments with the cases in which pure isopral solution was used per rectum, it was found that the effect was noticed and narcosis became complete sooner; however, the administration of the chloroform had to be continued most carefully by an expert.

In 30 cases of curettage, 20 of which combined a plastic operation for relaxed outlet, cystocele or lacerated cervix, I followed 3 Grams of isopral in solution, per rectum, in 25 minutes, with a few drops of chloroform to effect, and operated, with the consumption of 7 mils of chloroform by inhalation. (1)

4 Grams of isopral in solution, combined with 9 mils of chloroform to effect in forty-two minutes. (2)

4.5 Grams of isopral in solution with 9 mils of chloroform to effect in forty-five minutes. (3) (That time some solution was lost for the reason that our technic was imperfect).

Hypodermic of morphine, 1-4 grain; hyoscyamine, 1-100 grain. Twenty minutes later, rectal infusion of 2 1-2 Grams of isopral, injected in ten minutes. Having lost some rectal infusion liquid, twenty-five minutes later, 150 drops of chloroform were administered. (4)

Isopral, 3 Grams in solution per rectum, adding, five minutes later, 3-16 grain of morphine per rectum. Asleep after ten minutes. Began operating one hour later, when chloroform was used to maintain narcosis. (5)

3-8 grain of morphine, hypodermically. Twenty minutes later, chloroform, 12 mils. (6)

3-8 grain of morphine, 1-150 grain; of atropine hypodermically 1-2 ampule equal to 3 drams of chloroform. (7)

Hyoscyamine hydrobromide, 1-150 grain; morphine hydrobromide, 3-8 grain, intragluteally. Chloroform, 18 mils. Dilatation and curettage of cervix consumed altogether twenty minutes. (8)

Morphine, hypodermically, 3-8 grain. Twelve minutes later, chloroform, 8 mils. Complete anesthesia in thirty-six minutes. (9)

Case 10 of this series, twenty minutes after a hypodermic of morphine, 1-2 grain, received 15 mils of chloroform. Went to sleep in thirty minutes. Kept under it twenty minutes more.

In cases 11 to 16, I gave hypodermic injections of morphine hydrobromide, 1-4 grain; hyoscyamine hydrobromide, 1-100 grain, fifteen minutes before starting chloroform, of which were used 8, 10, 10, 18, 20, and 9 mils respectively. Complete anesthesia took place in 38, 16, 25, 30, 18, and 23 minutes, respectively.

In cases 17, 18, and 19, hypodermic injection of morphine, 1-4 grain, and atropine, 1-50 grain, required 12 mils, 15 mils and 15 mils of chloroform for complete anesthesia to take place in thirteen, twenty, and twenty-two minutes, respectively.

One patient (20) received morphine sulphate, 1-4 grain hypodermically; barbital-sodium, 5 grains in divided doses; injections given at 10-minute intervals. Was finally put to sleep, within thirty minutes, with one dose of 150 drops (about 2 1-2 drams) of chloroform. (20)

Another patient slept for one hour from a rectal infusion of barbital-sodium, 10 grains, in a 2-dram solution, and 1 dram of chloroform. Effect in fifteen minutes. (21)

7 1-2 grains of barbital-sodium in divided doses, injected hypodermically, adding 17 mils of chloroform, gave twenty-two minutes of deep anesthesia (case 22); while 5 grains of barbital-sodium, hypodermically, called for 9 mils of chloroform for anesthesia. This is the only case (23) in which vomiting interrupted the narcosis, lasting three minutes. In all the other cases,

neither retching nor vomiting disturbed favorable progress.

An alcoholic received morphine, 1-4 grain, hyoscyamine, 1-100 grain, hypodermically, and 22 mils of chloroform, and went to sleep in twenty-five minutes, but, caused disturbance. (28)

The very first patient (case 24, January 24, 1909) to whom I gave isopral, 40 grains by mouth, vomited the entire dose and had to be chloroformed. Another patient (25) retained 2 10-grain tablets of isopral and was put to sleep, without vomiting, half an hour later, with 14 mils of chloroform. Of course, the dose had been much too small.

That there can be little danger of intoxication from an overdose, appears from the case of E. T. (bartholinitis) previously mentioned, and again from the following cases: (26) Mrs. H., age 28, stout, mentally deficient, received first 2 Grams of isopral in solution per rectum, equal to 32 grains; morphine, 1-8 grain; and hyoscyamine, 1-100 grain, hypodermically; and 3 drams of chloroform. She fell asleep in twelve minutes, with no untoward after effects.

A woman, G., age 24, received 5 Grams (80 grains) of isopral in solution per rectum; fifteen minutes later, 1-2 grain of morphine sulphate, hypodermically, and, twenty-five minutes after the rectal infusion, 5 mils of chloroform. Curettage took only seven minutes. She slept three hours (27).

Even a combination of morphine, 3-8 grain hypodermically, as a preliminary to 40 mils isopral solution per rectum, left no untoward effects (29). Another patient (30) went asleep thirty minutes after receiving 50 mils solutions of isopral per rectum, with an addition of 18 mils of chloroform; for which she asked because she "had had it once before."

In conclusion, any means to cause narcosis to enter more speedily, to render it more complete in a short time, consuming a smaller quantity of the drug and rendering it less disagreeable for the patient and safer than was the rule, must be seriously considered, thoroughly studied, and put into practice at once.

Among the drugs available, I have given particular attention to the modern hypnotics and selected from them those which seem the safest for the patient and can be administered under my own direction without requiring an expert assistant. Those which are devoid of a depressing influence upon the innervation of the heart are: isopral, barbital-sodium, and chloretone. Experiments with the latter I have only just begun.

The great advantage, that the patient need not inhale anything, saves him the fear and fright of the narcosis. There is no vomiting and, therefore, less danger of interruption. It requires no trained anesthetist. There are no after-effects, which is of special advantage after a herniotomy or other abdominal operations. For operations about the head and face, this rectal anesthesia is the ideal method. The patient need not be starved before the operation and even may gratify a good appetite on the morning of the ordeal.

Enuresis: A Few Simple Methods of Treatment

By SIMON L. KATZOFF, M. D., LL. B., Bridgeport, Connecticut

ENURESIS is a condition in which the urine is passed involuntarily or unconsciously; it is considered, not so much a disease, as a symptom common to many diseases and disorders; it is a frequent and troublesome affection of children, depending upon causes often difficult to detect.

Enuresis may consist of partial or complete loss of power to retain the urine. The most common form is, wetting the bed during sleep; in rare cases, the child may have an almost incessant urging to pass water, which, if not responded to, results in a painless involuntary discharge. The affection is most common in children between three or four and fourteen to sixteen years of age.

Dr. Charles Goodwin Jennings divides the nervous mechanism of micturition into three parts, as follows:

1. The spinal center in the gray substance of the third, fourth, and fifth sacral

segments; sympathetic centers, which are cell-complexes inserted in the hypogastric plexus; and cortical and subcortial cerebral centers, which communicate with the spinal centers through fibers in the anterolateral columns of the cord.

2. The efferent limb of the reflexes, consisting of sensory fibers distributed to the bladder-wall, which enter the cord with the posterior roots of the second, third, and fourth sacral segments.

3. The efferent limb of the yellow arc, carrying motor fibers to the sphincter vesicæ and destrusor urinæ, which reach the bladder by the pudendal nerve and the inferior hypogastric plexus.

In infancy, urination is purely a reflex act. The urine is retained in the bladder by the tone of the elastic tissues surrounding the neck of the bladder and the urethra and by the tonic contraction of the vesical sphincter. At about the end of the second year, the spinal reflex mechanism comes under the control of the cerebral centers, and within certain limits the urine is retained or the bladder emptied at will.

After the third year, inability to control the discharge of the reflex spinal mechanism of micturition, under ordinary conditions, constitutes enuresis. During sleep, cerebral control is lessened, and it is at this time that causes exciting reflex discharge are most active.

The Many Causes of Enuresis

Nocturnal enuresis is the most common form of the disorder. Constant enuresis, diurnal as well as noctural, is frequent. This form may be due to mental enfeeblement or to some serious disease of the central nervous system. Spina bifida occulta is an occasional cause and is incurable. Epilepsy as a cause of noctural incontinence should be kept in mind. When it is impossible to ascribe to enuresis an adequate cause, the condition is considered as a neurosis.

It must not be forgotten that, while in some cases the irritating pathological condition is manifest and would excite an enuresis in a normal child, in most cases the exciting cause is trivial, and the important factor in the condition is the underlying nervous instability of the child, which may be inherited or acquired.

The causes of incontinence are many and peculiar: anything which increases the irritability of the spinal center, or which interferes with the cerebral control over this center; or anything which increases the irritability of the terminal filaments of the vesical nerves or of those in the neighborhood. The cause, therefore, may be in the central nervous system, in the urine, in the bladder or in any of the adjacent organs.

The causes relating to the central nervous system may be: anemia, malnutrition, an inherited nervous constitution or neurasthenia, the result of the child's surroundings. In such cases, it is often associated with chorea, locomotor ataxia, epilepsy, hysteria, shock or neuralgia.

Vesical irritability may be caused by polyuria, hyperacidity or alkalinity of the urine, and bacteriuria. A careful analysis of the urine, chemical and microscopic, therefore, is very important. A hyperacidity, a few cells or an excess of epithelium, indicating a mild vesical catarrh or infection with the colon-bacillus, may be the exciting cause of an enuresis.

In the bladder itself, we have cystitis and vesical calculus to look for, also malformations, muscular spasms of the detrusor urinæ muscle, stones, and tumors.

Local irritation in the adjacent organs may be due to adherent prepuce, balanitis, phimosis or a narrow meatus. Stricture of the urethra and an enlarged prostate in advanced age may bring about enuresis.

We should like to feel that in the foregoing we had mentioned all the causes of this trouble, but, the list is not yet exhausted; for, there still have to be considered a few more indirect or remote causes, at least in the domain of rectal irritation including pinworms, anal fissure and rectal polypus and that of vaginal irritation based upon vulvovaginitis or an adherent clitoris; these though being only rarely the cause.

Among the diseases of remote organs producing enuresis the following may be mentioned: adenoids, hypertrophied tonsils, thyroid insufficiency, chronic gastric and intestinal indigestion, and diabetes mellitus and insipidus.

The Prognosis

As to the prognosis, we may briefly say that the condition usually is hopeless when it depends upon organic disease of the brain and cord, also when owing to mal-

formation, unless these are amenable to surgical treatment. My own experience with many cases of enuresis in children justifies the statement that almost all cases due to functional or nervous disturbances (not organic) can be and are being cured. It is only a question of reasonable time, varying according to the age of the child, the duration of the symptoms, and the nature of the exciting cause.

Full ninety-five percent or more of cases of enuresis due to functional disturbances can, positively, be cured. Not only can the trouble be cured, it is being cured every day. But, mark well, seldom can a child be cured of enuresis by merely giving the parent or guardian a prescription and giving two or three slipshod rules.

Management of the Condition

It is, of course, understood that the cause or apparent cause, when known, is to be removed, if possible. The general condition of the patient must be considered. After ascertaining the past and present physical and mental history of the patient and after making an exhaustive physical survey of the patient, if we find our patient a fit subject, we may proceed with the various methods of treatment.

These patients generally are taken "by the case." The parent is honestly told the approximate length of time it may take to cure the child—say, from thirty to sixty days, on an average—the doctor to be paid down a reasonable sum (unless the patient is poor), perhaps one-half the amount agreed upon, so as to make sure that the patient will come for treatments and advice and examinations as often as necessary. That, and that only, will make the parents have patience and "stick" and to afford themselves a maximum opportunity for seeing a cure effected.

My experience in this field, as well as in curing piles (without the knife), has been that patients will stop treatment just as soon as they get temporory relief. Soon after, though, they will return complaining and telling why they were not impressed with the severity of the condition and why they did not hold out until they were permanently well. Unless this method is adopted (which is the best for doctor and for patient), I can not see how it will be possible to cure these patients. So, first and foremost, the patients, or their parents, must definitely decide to "want to really get well," to follow directions and specific details from A to Z, and to show their faith and their willingness to proceed by paying a lump sum in advance, as suggested.

Some Specific Measures

The direct treatment consists of hygienic, dietetic, psychic, hydrotherapeutic, and medicinal measures. There is no harm in raising the foot of the bed, so that the urine does not rest on the base of the bladder. Some recommend electricity—the faradic current—one electrode in the rectum, the other on the perineum. A cold spinal douche, with a brisk rub, may be given in some cases. Also, the rectum may be unloaded by means of a warm oil enema. The child should evacuate the bladder just before retiring, and may be awakened late in the evening, for the same purpose. Some mechanical device designed to prevent the child from lying on the back has occasionally been successful. Various electrical devices have been employed and sometimes proved beneficial or resulted in a cure. The urethal cooling sound or psychorophore of Winternitz has been in use for curing nocturnal enuresis.

Every effort should be made to give these children quiet, invigorating surroundings. The nervous tension of school-life should be relieved or ameliorated and all exciting occupations and amusements forbidden. Restriction of fluids ingested in the latter part of the day has a good effect. Early hours and plenty of sleep must be insisted upon. Certain articles of diet are to be avoided, and coffee, tea, and beer should be very sparingly allowed or not at all. Meats may be eaten in moderation. The diet which succeeds best is a simple one composed of milk, vegetables, fruits, cereals and meats. The child should be taught to hold its water as long as possible during the day in order to accustom the bladder to full distention.

Measures directed toward improving the general muscular and nervous tone are of great importance, and they are required in most instances. Anemia, chlorosis, malnutrition, indigestion, and constipation should each receive careful attention. Any local condition, such as adenoid growths of the pharynx, which might serve to increase the general nervous irritability, should be removed.

The moral treatment here is important. One should work upon the child's pride and

use every possible means to strengthen the will-power. Infliction of punishment, whether corporal or otherwise, does little good, and with most children even is absolutely harmful. With children in whom incontinence is chiefly a matter of habit, the offering of a reward will prove a very efficacious means of treatment.

If there is reason to suspect a contracted bladder, a cure may sometimes be accomplished by daily distending the organ, up to its normal capacity, with warm water.

In locomotor ataxia, myelitis, and paralysis, the bladder should be emptied four times in twenty-four hours, and should be washed with a silver solution or other such preparation; sometimes a urinal must be worn. In most of these organic diseases, all our efforts for a cure prove unsuccessful; the best we can do, most of the time, is to give relief.

Useful Drugs

I certainly do believe in the careful and intelligent administration of medicines for curing functional enuresis; it has helped very materially in my own hands. It is only the abuse that harms, as in everything else. Among the medicinal agents, the most reliable ones are, atropine sulphate, thuja, rhus aromatica, and equisetum. One little tablet put up by the Abbott Laboratories (and worth its weight in radium), is composed of the following ingredients and has worked wonders: atropine sulphate, gr. 1-1500; strychnine sulphate, gr. 1-1000, sodium cantharidate, gr. 1-5000; santonin, gr. 1-50; one such to be taken hourly for three or four doses, before bed-time. Another little tablet, composed of rhus aromatica, equisetum, and belladonna, also has worked wonders; of course, always in conjunction with other indicated remedies, according to the conditions present.

One other cardinal principle not to be overlooked is, that the child should eat no starchy food or, when necessary, but very little of it. I have had cases where nothing really helped until bread, potatoes, biscuits, cabbage, and the like were entirely excluded from the diet.

Ergot sometimes is useful, but is not so efficacious as thuja, atropine or rhus aromatica. Personally, I never use it. Atropine always should be preferred to belladonna, although the latter may be given, and, then, perhaps, in a vehicle such as elixir of buchu or santal, with from 2 to 10 grains of potassium acetate—which acts to allay irritability of the mucous membrane of the bladder. Tincture of hyoscyamus may replace the belladonna when there is infection along the urinary tract. Tincture of nux vomica or strychnine sulphate generally is indicated in all cases in which atony of the sphincter muscle is a factor in enuresis. Thalocal, gelseminine, and arbutin are very helpful at times.

Freyberger recommends fluid extract of rhus aromatica very highly, in doses of from 5 to 10 minims to a child of five years, in cases that have resisted belladonna. Cathelin, in 1901, proposed epidural injections of saline solution for relieving enuresis. I do not indorse any such procedure. Tukey, Bernheim, Cullor, and other practitioners of hypnotic therapy urge the suggestive and hypnotic methods. I do not believe it advisable, in children, at least.

Other simple and worthy suggestions are as follows: (1) The tincture of cantharides, 1 to 2 drops three times a day. (2) Parch, grind, and boil common white beans, of which make a drink, to be used freely at meals, as one would drink coffee. (3) Lime-water or sodium bicarbonate, about 3 grains three or four times a day, with mild bitter tonics, such as a tea made of Peruvian bark, and so on, may be tried. (4) Uva ursi also has been recommended, as follows: Upon a handful of the leaves, pour half a pint of boiling water. Of the cold infusion, give half a teacupful three times a day; and for small children about half that quantity. (5) Another oldtime suggestion is, to dissolve one roll of gelatin in one pint of boiling water, strain, and add one pint of sweet milk; put this again on the fire and just let it boil up; then add some sugar and grated nutmeg. It may be diluted with water and taken in amounts of one-quarter to one-half tumblerful a day. This is supposed to be useful in an irritable condition of the bladder. Every reasonable suggestion toward curing this terrible disease, or symptom, should be encouraged.

After Thirty Years—II

Notes and Reflections on Life and Work

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

EDITORIAL COMMENT.—Professor Rittenhouse's long experience as a physician and teacher, and his open-minded sympathetic nature have combined to give him an experience and a viewpoint making him an unusually fit counsellor and advisor of younger men. We anticipate much benefit from this series of articles which commenced in the April issue.

[*Continued from the April issue, page 278.*]

Settling Down to Practice.

WHEN the doctor has completed his medical course and obtained a license to practice, he finds himself confronted by several questions the decision of which can not be put off and whose right decision is so momentous to his future welfare that he can not afford to leave the matter to chance.

Where shall the aspiring embryo doctor locate? In a large city or in a country town or in a rural village? Shall he cultivate a general practice or become a specialist?

To the average graduate, the city looks like an attractive field. The city doctor escapes the long country rides over bad roads in storm and cold. The country doctor works hard for small fees, while he is cut off from many of the things that make life attractive to his city confrère. Then, also, the large fees gathered in by the city specialist present themselves as a tempting bait.

The result is, that the cities always are oversupplied with doctors. Of every graduating class, a considerably proportion plan to remain in the city. Some of these make of it a success, many more, though, eke out merely a scanty living, dragging along for years, on the shabby-genteel edge of poverty, their income being less than the wages of a good mechanic. From time to time, a few of these give up the disconcerting struggle and drift into some other occupation. A few of the wiser ones do what they should have done in the first place, namely, they go to some country town and there, as a rule, succeed.

It is a well-known fact that very few city doctors grow rich or even well-to-do. Those who do are chiefly specialists, who have been fortunate enough to surround themselves with a wealthy clientele, or who have obtained wealth by marriage, inheritance or speculation.

The medical adviser of the great mass of the people is fortunate if he makes just a good living. There are so many clients who can not or will not pay that the nominal fee is heavily discounted when it comes to making collections. The country doctor, as a rule, can collect a larger proportion of his bills than can his city brother; although in some localities he can make the bulk of his collections only once a year—when the farmer sells his crops. In some communities, he has to take a part of his pay in farm produce. This is not altogether a disadvantage, for, he gets a good part of his household supplies in better condition than does the city-dweller, who pays high prices for food of an inferior quality.

I am inclined to think that the doctor who is located in a town of from 5,000 to 15,000 inhabitants is in a position to get more out of life than his city brother. If he is surrounded by a prosperous farming community with good roads, I am sure of it.

If he decides to locate in the city, the question is again, Where? Shall he pick out a fine residence district and work for a high-class clientele? Shall he select a middle-class neighborhood and do general family work? Shall he locate in some district where the foreigners swarm and most of them are poor? Shall he devote himself to a specialty from the beginning? Shall he lay his wires from the first to become a great surgeon—that irridescent dream of so many? Shall he have a downtown office? Shall he keep an automobile? Shall he teach in medical college?

Truly, a list of questions sufficient to furnish food for thought. If he settles in a wealthy neighborhood, he must have capi-

tal enough to put up a good front and appear prosperous for two or three years, for, among this class of people patients come slowly. Most of them have a family physician, are slow to change, and when they do change they want a doctor who appears to be in their own class. Doctors who practice in what seem like wealthy neighborhoods tell me that they meet a good many people who are living beyond their means and putting on so much style that they have no money to pay their bills.

My own observation is, that deadbeats are plentiful among all classes. Probably, all things considered, the middle classes, consisting of mechanics and salaried people, are the most satisfactory as patients. The poor and the foreign population offer a field in which a practice can be worked up more quickly than anywhere else, but, much of it will be charity work, done under unpleasant and unfavorable conditions. Among the foreign populations, certain nationalities are noted for their thrift, and these make good patients, for, they generally pay cash if the doctor will make his fees moderate.

In deciding on a location, the questions that arise are numerous and perplexing, still, there are certain general principles that are pretty well settled and which may help the young doctor in coming to a decision. Of course, personal tastes and inclinations must play a large part in any decision. So must personal qualities, whether inherited or acquired. Every graduating class contains some men who would be failures in city practice, as well as some others who could not adjust themselves to the people and customs of a farming community.

One fact that stands out plainly and is easily recognized is this: *In every large city, a considerable number of doctors are struggling along on the ragged edge of poverty.* Many of them are men of decided ability, capable of doing first-rate work, but, they lack some of the qualities necessary to win and hold patients. And the pity of it is that they could acquire those qualities if they would but give the matter sufficient thought.

The Need of Publicity.

A doctor must advertise—not, indeed, in the same way that the merchant does, but, in some way he must let the public know that he exists and is ready for his share of the world's work. He may not advertise commercially; not because the code of ethics forbids, but, because good taste and common sense forbid. The code of ethics simply formulates the rules that apply to the situation, as dictated by good taste and common sense.

How, then, may the doctor bring himself before the public? What can he legitimately do to remind the people that he is in the field? A great deal. The shyness that prevents them from making new acquaintances must be overcome. *Acquaintanceship is a doctors' capital.* The more people he knows, the better his chance of being called by one of them. The most unlikely person may turn out to become a client.

In my first year of practice, I happened to win the good will of a German washerwoman who seemed about as unlikely to prove a valuable friend as could well be imagined. She was too homely for words to tell, with a big mole on her cheek, a moustache like a grenadier, and two tombstone teeth in front that did not meet. She spoke a mixture of German and English that would have made a fortune in vaudeville. She was so crosseyed that when she wept the tears must have run down her back. Yet, this kindly old soul sent me patient after patient and they in turn sent me others until I could have constructed quite a genealogical tree of the clients whom I owed directly or indirectly to this time-scarred veteran of the washtub.

A doctor, then, should try to know as many people as possible. He must study every means of getting acquainted, and when he has made a new acquaintance he must see to it that he does not forget him. *People like to be remembered, especially by name.* It is no use to say, "I can not remember people's names". One *can* learn to remember. Many persons are careless when meeting anyone for the first time. Even if introduced, they forget the name the next minute. This habit can easily be replaced by the one of training the memory to remember names. Associate every new name with some known name or incident or personal characteristic. I have found it a great help to enter a new name, at the earliest opportunity, in a special place in my pocket-memorandum,

with a word or two of identification. I also have an arrangement in the card-index of patients, which stands on my desk, that nearly always will enable me to recall a patient's name. A little ingenuity will enable anyone to devise means of bringing into line a treacherous memory. It is an excellent investment of a little time and pains and will pay good dividends.

Value of Society Membership

I am often asked by prospective doctors as to the value of membership in clubs, lodges, churches, and other societies. Do they help the young doctor to build up a practice? That will depend largely upon the man himself. These gatherings furnish him with an excellent opportunity: it is up to him to use it wisely. We have all heard the timehonored joke of the doctor who gets himself called out of church as an advertising trick. The honest mind revolts at the idea of commercializing church-membership in such a manner. There is, of course, no reason why a doctor should not be a regular attendant at church, nor any reason why he should not benefit by the acquaintanceship the church affords. It is only the bald abuse of the opportunity that is wrong. The public are not all fools; they are quick to detect insincerity; and the doctor who thinks he can use the church for a stalking-horse without people seeing through his motives is very dull-witted.

Membership in clubs, lodges, and the like is always valuable in so far as it adds to ones' list of acquaintances. It will not do to expect results too soon, however. The doctor who joins a club or a lodge and then expects that in a short time a large proportion of the members will employ him professionally needs to have his bump of vanity pared down a bit, like a troublesome corn. If he joins such a society for a legitimate purpose and then takes ahold of its affairs to help make it a success, he will get a sort of advertising that is perfectly legitimate and which grows more valuable as time goes on. He is on trial, in a sense, and if he makes a good impression he will ultimately get business. But, the moment he lets it be seen that his chief object is, to extend his practice, he defeats that very object.

I belong to a club which has among its members a certain doctor who is always talking of the number of operations he has performed and the number of patients he has seen. He has become a standing joke. Club-members occasionally have a bit of quiet fun by drawing him out and encouraging him to outdo himself. He certainly is not doing good advertising.

When I joined this club, it was for the sake of its social and recreative features. If it brought me business, well and good; if it did not, it still was worth all it cost as a means of recreation. I was a member several years before I got a patient out of it. Finally here and there a member would consult me professionally, until in time the club became a good source of business. As said, one must not expect results too soon. I have known men to join this club and then, after a few months, resign, because they had got no business out of it. They had the wrong point of view; in other words, they had an exaggerated sense of their own importance.

I would say, then, to the young doctor: You *must* get acquaintances, but, those acquaintances are under no obligation to become your patients. *You* are on trial. If you can inspire your acquaintances with the idea that you are the right kind of a man, they may conclude that you could be the right kind of doctor.

After all, personality in a doctor goes a long way, much further than most people imagine. Has he the characteristics that will make people like him? If so, they will trust him as a doctor. I have often known men whose skill was not of the highest enjoying a large practice, chiefly because they were likable. They were kindly, sympathetic, sincere, good companions, and good friends. The layman looking for a family physician is likely to be attracted by such a man even though his professional skill may not be of the highest. After all, the layman has little means of judging a doctor's skill. If the doctor has good, practical, common sense, the layman is likely to observe that fact and then take the rest for granted.

On Dispensing Medicines.

Shall the doctor dispense his own medicines? Yes! By all means, yes, except in certain special circumstances where it may be inadvisable. For example, it sometimes happens that a doctor is located in close proximity to a drugstore or in other

ways in intimate relations with the druggist, so that a large proportion of his patients are sent to him by the druggist. In such a case, the doctor could not honorably dispense medicines to patients who came to him through the druggist. If he did, the patients would not be sent to him very long. Other special conditions may, in certain cases, make it advisable for the doctor to write prescriptions.

In general, however, it seems to me that the advantages of a doctor doing the most of his own dispensing are so great and so obvious that there is little room for argument. Especially is this true today more than ever before, because manufacturing pharmacy has placed at our disposal the very great convenience of alkaloids and other preparations in tablet or granule form, thus making it possible for the doctor to do his dispensing at a very small expense of time, and also enabling him to attain an accuracy of dosage which is not attainable by the bottle-and-spoon method. These two considerations alone, namely, economy of time and accuracy of dose outweigh almost every other consideration.

This question of dispensing is a momentous one, and it seems to me that it is growing in importance every day. My own observation and experience have forced upon me the conviction that the average drugstore in the city of Chicago is deteriorating and that the doctor, in writing a prescription to be filled at the nearest drugstore, takes considerable risk of getting unsatisfactory results, from lack of quality in the drugs or lack of reliability in their compounding. I should be the last person in the world to do an injustice to the competent and reliable pharmacist, and I am glad to admit that I know many such. I am simply stating regretfully what I believe to be a fact, namely, that the *proportion* of reliable druggists is on the decrease, at least in this city. We may recommend a reliable druggist to the patient, but, we can not compel him to follow our advice.

Among the advantages of handling one's own medicines, I want to put emphasis upon the following:

1. Reliability and quality. The doctor can buy his supplies from wholesalers whose name is a guaranty that the quality is first-class.

2. Economy to the patient. Even if the doctor makes a small charge, to cover expensive medicines, it still is so much less than prescription prices that the patient is relieved of a heavy burden. Prescription prices are rich people's prices; the common man can not afford them.

3. It holds the patient to the doctor. When his medicine is used up, he comes back to the doctor, instead of getting a "refill" for himself and perhaps for his friends. A request to refuse refills and copies of prescriptions is a dead letter with most druggists. I once traced one prescription that had been refilled twelve times for the benefit of a whole neighborhood. I had received a dollar for it.

4. In the treatment of venereal disease, especially, it is an absolute necessity to bind the patient closely, by giving him at each visit only just enough medicine to last him until he ought to come again. With most of these patients, this is the only way to get satisfactory results, either therapeutically or financially.

5. Most doctors have favorite prescriptions. The only way to get proper success out of these is, to dispense them one's self. For example, Baer's sedative (valerian, sumbul, and asafetida) has been a money-maker for me. It would never have been so if I had written prescriptions for it. It is not a secret remedy, but, each patient tells her friends what it has done for her and then they come to me. I get a legitimate reward for having observed and worked out a certain line of treatment.

6. It promotes simplicity of prescribing. It tends to relegate to the background the oldfashioned "shotgun" formulas of from six to twelve ingredients. In this way, it promotes more accurate therapeutics, for, when we use but one or two drugs at a time, we are not so much in doubt which one produced the desired effect. Not only do we tend to use fewer drugs at one time, but, fewer altogether. Most doctors would learn with surprise how brief a list of drugs would suffice for most of the diseases we meet. For many years, I have carried a pocket-case with vials for twelve kinds of tablets or granules, and I have been surprised, myself, to see how seldom I need to go outside of this list.

The organized druggists of the United States have made attempts, and probably will make others, to get state legislation to prevent doctors from dispensing their own

medicines. It would be difficult to conceive of a more flagrant violation of the rights of the individual than this—the rights of the layman as well as those of the physician. It behooves the profession to be watchful. The arguments used to achieve this purpose are absurd in their speciousness and falsity, and, yet, they can be made to sound very plausible in the ears of the average legislator, who has too little direct aquaintance with the matter to reason judiciously.

The danger is all the greater because of the indifference of a part of the medical profession, namely, the specialists in the downtown offices. They have no particular objection to depending upon the prescription-druggist, because they are fairly certain that their prescriptions will go to reliable druggists and because they do not need to consider the question of expense to the patient. These two considerations bear heavily upon the general practitioner. He must have his prescriptions filled reliably, and, yet, he has little control over the matter of where they shall be filled. His patients can not afford to pay fancy prices for their medicines.

Take for example a case of pneumonia. The medicine must be absolutely reliable in quality or else the patient's safety is jeopardized. The drug bill, if the case is managed by prescription, will be so considerable as to tax the patient's resources very heavily, and to that extent prevent the doctor from getting adequate remuneration for his work. I have many an account on my ledgers today that was never paid, because the drug bill took all the patient had.

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[*To be continued.*]

The Treatment of Chronic Diseases

Diseases of the Nervous System

By GEORGE F. BUTLER, A. M., M. D., Kramer, Indiana
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DISEASES of the nervous system are usually divided, for clinical purposes, into (1) diseases of the brain, (2) diseases of the spinal cord, and (3) diseases of the peripheral nerves, with (4) a final separate compartment for the group known as functional nervous diseases. And it may be remarked, in passing, that this kind of classification, like most classifications "for clinical convenience", is, really, anything but a convenience, while it is responsible for a large part of the confusion and, hence, the nihilism that attends the therapeutics of the subject.

As soon as men begin to think about pathologic conditions in terms of disease-names, instead of disease-pictures, they immediately and unwittingly—no matter how carefully they believe themselves to be armed against it—begin to think and speak of their therapeutics in similar cut and dried fashion. And this speedily results in therapeutic nihilism, because it quickly becomes evident that drug-names and disease-names have no necessary or constant relation to each other.

The one and only adequate classification for any group of body-diseases, for therapeutic purposes, is that which is based upon the physiologic process involved in the condition. The simpler and more proximate this conception of disease is kept, the simpler and more proximate will be the conception of the therapy it calls for; and, contrariwise, the more the one is befogged by artificial considerations of topography and nomenclature, the more remote the other will become.

There is no medicine that acts specifically upon the head or the back or the limbs; nor is there any that is specifically adapted to measles or pneumonia or meningitis, as entities. But, there are remedies which, in virtue of their influence upon physiological processes, affect certain tissues (the word is used in its broad sense) and functions: and it is by a proper utilization of this influence upon such tissues and functions that we bring about therapeutic results.

Plainly, then, the therapeutic classification of disease-forms must rest upon the tissue changes and functional derangements which characterize disease-condi-

tions—and which are not necessarily constant for any "named" disease.

Rational Classification of Nervous Diseases.

Upon these premises, there can be but three classes of nervous disease; namely: (1) Inflammatory. (2) Degenerative. (3) Functional.

By *the first* term are meant those diseases of the nerve-tracts which depend upon the train of pathologic processes pertaining to inflammation, including exudation, infiltration, pressure-necrosis, and the rest of the sequels. By *the second*, those in which the essential morbid element is a hyperplasia of the interstitial nerve-tissue or its replacement by connective tissue. By *the third*, that group of nervous troubles in which no gross organic lesions are discernible, but, which, *apparently*, depend sheerly upon a functional disturbance, either in the neurons themselves or in the vasomotor mechanism associated with them.

To the foregoing rational classification, I invite the attention of those who may read this article. Out of a decent regard, however, for conventionalities, the usual order will be observed in treating of the members of these disease-groups; namely: diseases of the brain, of the cord, and of the peripheral nerves, in the sequence named. Which, be it understood, is merely a matter of itemized order, and, in no sense, of classification.

It would seem to be an axiomatic proposition that, inasmuch as the physiologic pathology in diseases of the nervous system is fundamentally the same as in diseases of other regions, their therapeutics ought, at least, to be just as potential.

By the same token, the therapeutic principles that apply to the one ought to apply to the other.

True, there are certain elements appertaining to the anatomy and physiology of the nervous system that modify these two propositions. That is true in comparing any of the tissues or organs of the body. But, they are merely incidental considerations and do not affect the true therapeutic coefficient. And one of the things that have played havoc with neurologic therapeutics is the fact that we have paid too much attention to these special considerations and too little to the simple underlying physiology of the matter. Let me illustrate.

One of the prominent, constant accompaniments of inflammation is pain. In meningitis, because of the peculiar relations of the special tissues involved, the pain mostly takes the form of headache and is exceptionally severe and constant. Now, in the case of, say, a visceral inflammation, we recognize the incidental nature of the pain, and, while we adopt reasonable means to keep it within tolerable bounds, we do not regard that as the prime objective of our treatment; above all, we recognize that opiates are antagonistic to our therapy of the underlying conditions of inflammation, hence, we employ them as little as possible. But, in the sense of meningitis, we have been so obsessed with the neurological conception that we have looked upon the pain as a basic element, and have directed our therapeutic agent (usually opium) to the relief of that, with some sort of idea that we were thereby getting at the root of the trouble, forgetting that in this way we were destroying, instead of assisting, whatever chance nature had of remedying the underlying congestion and exudation, of which pain is a manifestation.

Again: One of the common manifestations of functional derangement of an organ or tissue is a certain irritability, which displays itself in a spastic functionation of that organ or tissue—as, diarrhea in functional intestinal troubles. Now, in ordinary cases, unless the irritability is excessive, we do not address our main therapeutic effort toward this incidental symptom. We adjust, with our remedy, the vasomotor mechanism or whatever may be at fault, and the spastic trouble rights itself.

But, in the case of nervous diseases, we have lost our sense of proportions. The "nervous" symptoms of these functional diseases are precisely analogous to the diarrhea in the bowel; they represent the way nerve-tissue has of manifesting irritability or exhaustion. Yet, so obsessed have we been with the neurological idea that we have regarded these symptoms as the disease itself and have been loading up our patients with bromides, *bromides*, BROMIDES, in the fond delusion that we were striking at the heart of the trouble. I dislike to speak ill of old and time-

honored servants, still, I am constrained to assert that the bromides have been the curse of neurologic therapeutics.

It is this obsession on the part of the neurologist which accounts for the frequent surprising spectacle of a general practitioner succeeding in a neurological case where a distinguished specialist has failed or has given up. The specialist, obsessed by the "special" aspects of the disease, has been thinking nothing but opiates and bromides; and he knows well the futility of such treatment. The general practitioner, with no such prejudices to blind him, has gone ahead with the remedies that the patient's condition seemed to call for and has won the case.

The fact is, as already intimated, *the pathology of the nervous system*, so far as it relates to treatment, *is precisely the same as that of diseases of the rest of the body*, calls for the same therapeutic principles, and yields proportionately the same results.

Inflammatory Diseases.

The inflammatory group of nervous diseases includes the following conditions: (1) Encephalitis. (2) Meningitis. (3) Myelitis. (4) Poliomyelitis. (5) Landry's paralysis. (6) Neuritis.

It will be noticed that the morbid physiology of all these diseases, as boiled down and set forth in this article, is essentially the same; and, further, that it is essentially the same as that of all other inflammatory diseases. Stasis, congestion, exudation, infiltration pressure-necrosis, and, if not relieved, interstitial hyperplasia—this is the history of every inflammatory process. And it is precisely this train of events with which we have to do in the case of the diseases of this group, in the nerve-tissues of brain, cord, and peripheral nerves.

The most elementary logic would instruct us that the rational therapy of such conditions should be precisely the same as that which our modern knowledge of pathology and therapeutics leads us to apply to similar conditions elsewhere. However, a glance down through the system of treatment laid down in current textbooks and magazine articles on neurology will demonstrate the need of reasserting this simple proposition.

What, for instance, is the approved treatment, as currently taught, for myelitis? Opium, quinine, arsenic, strychnine, iodides! For myelitis, the formula varies like the Irishman's steak-and-potato dinner—it is "the same, barring the steak"; in other words, the quinine left out. For meningitis, we are told, "there is no drug that influences the course of the disease." Yet, the physiologic pathology of these diseases is the same as that of, let us say, appendicitis. Would any modern physician think of prescribing or recommending the above-named drugs for appendicitis; or expect to get any results, if he did so, beyond the analgesic effect of opium?—the opium justifiable as an expedient, useless as a curative remedy.

The rational basis of therapeutics in inflammatory conditions, as called for by the physiologic pathology, is, first, derivative, then absorptive, and always eliminative therapy; and inflammations of the nervous system offer no exception to the rule.

The secret of success in this treatment lies in using *drugs of definite dependable action* and pushing them boldly, albeit intelligently, *to effect*. So attacked, even the most formidable of the inflammatory nervous diseases, like those of other tissues, often yield with surprising and gratifying promptness, and leave the victory with the physician.

Encephalitis.

(*Cerebritis, Inflammation of the Brain*)

Treatment of encephalitis, in order to be availing, must be applied in the early stages, while the disease process still is one of active congestion, and must be directed toward the equalization of the disturbed circulation. In other words, the treatment of the early stage, both pharmacologically and physically, must be active derivative treatment of the most vigorous kind.

There is no class of diseases in which hydrotherapy has a more decided field of usefulness than in the acute inflammatory diseases of the nervous system; and in none of this class is it more emphatically indicated than in encephalitis. Cold to the head, in the form of ice-bags, or, better still, the cold-water-coil; heat to the extremities and the abdomen, in the shape of hot-water-bags or electric pads; hot enemas thrown high into the colon at intervals of five or six hours; and frequent bathing of the body in tepid water, followed by a

towel-rub; all these are potent and useful measures for equalizing the circulation and thus relieving the congested brain-tissues.

At the outset, a brisk purge should be given, consisting of calomel, phenolphthalein, and ipecac, in small repeated doses, followed in the morning by a laxative saline. This fulfils a threefold purpose: first, it empties and cleans out the intestinal tract; second, it acts as an intestinal disinfectant, preventing the reabsorption of septic matter by an already overburdened blood; and, third, it draws a considerable quantity of blood to the intestinal vessels and so helps to relieve the cerebral stasis.

Having started intestinal flushing and instituted hydrotherapeutic measures, no time should be lost in administering suitable remedies; and these should be pushed vigorously and fearlessly to their full effect, their action, however, being carefully watched by the physician, so that the physiologic limits shall not be overpassed. The timid therapeutist who is prepared to dole out his medicines only in complacent, "safe" doses might here just as well withhold his hand; for, if drugs are to do any good at all, they must be pushed to the very limit of safety. It is, in effect, a desperate battle, in which time is a determining factor.

The promptest and most certain relaxant of the entire vasomotor system is atropine, in minute doses (of 1-500 grain) repeated hourly until the face is flushed. (In larger doses, the effect of atropine is precisely the reverse.) And this may be given for the first twenty-four hours. However, it is unfitted for continued administration, because of its action in checking body-secretions. Following the atropine—and perhaps the best from the beginning in the majority of cases—veratrine and aconitine are the ideal dilators of the capillaries and slowers of the heart, whereby the cerebral circulation is depleted and the temperature reduced; and these drugs have the advantage that they both stimulate glandular secretion instead of locking it up. Veratrine, especially, is an ideal remedy in this stage of the disease. Rarely it may be advisable to add strychnine to the combination, and perhaps a little digitalis, where the general muscular tone of the patient is low. Generally, however, these patients are sthenic types of individuals and require only the defervescing action of the veratrine and aconitine. And this is usually all the drug-treatment that is necessary during the first stage.

When the exudative stage sets in—as evidenced by the extreme rise in temperature, the slowing of the pulse, the stupor, and other compression-symptoms—the objective of treatment is, to drain, as rapidly as possible, the serous tissues of the brain. Ice-bags and water-coils must now be discarded, since we must depend upon the cerebral membranes to assist in their own drainage, and cold impedes their activity. Three channels of revulsion are open to us, namely, the bowels, the kidneys, and the skin, all of which must be called into requisition and stimulated by proper remedies to assist in the draining process.

A sharp, even drastic purgative should be given, such as elaterin or croton-oil, which will excite the bowels, not only to excretion, but, to vigorous secretion. Colchicum, in 5-drop doses of the tincture, is a powerful stimulant to elimination of fluids through the kidneys and skin; and it may be augmented by occasional doses of pilocarpine, 1-5 to 1-3 grain, provided there are no cardiac contraindications. In any case, if pilocarpine is given, the heart should be guarded meanwhile with sparteine and digitalis. I have found the old-fashioned apocynum, in the same dosage as recommended for colchicum, to be an excellent remedy in this stage of the disease—an invaluable adjunct to colchicum.

Encephalitis is usually a very acute affection, running its course either to death or to recovery in ten days or two weeks. Hence, the problem of feeding the patient is not a serious one, especially since these patients, as already stated, as a rule, are strong, hearty individuals, who are all the better for a temporary letup in their food. During the attack, it is best to feed them just as little as is consistent with the maintenance of reasonable strength, prescribing a general fever-diet. With the establishment of convalescence, a steadily increasing, plain, nourishing diet may be given, to make up for lost time.

[*To be continued.*]

What Others are Doing

THE NEWER WOUND TREATMENT.

Under the title of "The Newer Wound Treatment," Dr. Charles W. Delaney, surgeon to the Altoona Hospital, contributes an article to *The Medical Council* for April which is of special interest because of its bearing on industrial accident surgery. Of the newer antiseptic methods of wound treatment, he discusses the one elaborated by Doctor Dakin, the advantage of which is, that it is not complicated and entails but small expense.

The fundamental principles underlying the treatment in any of the antiseptic methods, Doctor Delaney points out, are essentially the same, and, unless the technic is closely observed, the treatment will be subject to failure. The prime requisite in the treatment of every wound is, absolutely perfect mechanical cleansing, removing the dead and devitalized tissue and foreign material. In a given case, it may be most expedient to excise the entire wound to a depth of one third to one-half of an inch, making a complete and thorough dissection of the parts. After the tissue is removed, free capillary oozing indicates that healthy tissue has been reached. Needless to say, a careful aseptic technic is called for in this operation. After the wound has been prepared in this manner, the field is thoroughly sprayed with a 20-percent solution of dichloramine-T dissolved in chlorinated eucalyptol, after which the wound may be sutured and the skin edges brought in apposition with little or no space for drainage.

The second rule required for perfect healing is, to insure absolute rest and immobilization. This expedient of nature, if carefully observed, probably is the greatest therapeutic means at hand in subduing infections and allaying inflammatory conditions, since it gives the natural defenders of the animal structures—the blood-serum and the leukocytes—an opportunity to assert themselves and protect the system from bacterial invasion. While some surgeons assert that careful and perfect cleansing, and rest, even without the addition of antiseptics, is sufficient for healing, Dr. Delaney holds that the addition of dichloramine-T exerts a beneficial influence. However, it must be repeated that perfect technic in every step is stringently called for, else results will not be satisfactory.

The new method has been employed by Doctor Delaney in treating industrial wounds, for the past six months, with the result that, so far, no pus or infection was observed to develop in a single instance. Doctor Delaney considers dichloramine-T an exceedingly useful preparation for first-aid dressing in industrial establishments, insisting, however, that, to obtain the best results, early treatment is necessary, together with thorough wound cleansing and absolute rest.

It may be pointed out that, recently, a new and improved solvent for dichloramine-T has been put on the market which is superior to the chlorinated eucalyptol and contributes to even better results. This solvent is known as chlorcosane and was introduced by Doctors Dakin and Dunham. It dissolves about 8 per cent of dichloramine-T, while the ordinary germicidal strength required is but 5 per cent.

GENERAL ANALGESIA BY ORAL ADMINISTRATION

In *The British Medical Journal* for March 2, (cf. *Jour. A. M. M.* for April 6), Dr. James T. Gwathmey and Dr. Howard T. Karsner of the Medical Reserve Corps, U. S. Army, published a preliminary report on some investigations that possess large possibilities for practical use, the authors having attempted to induce general analgesia, rather than anesthesia, that might be applicable for short operations and for painful dressings.

In some experiments, on rabbits, with a variety of anesthetic agents, it was found that a 50-percent mixture of ether in olive-

oil gave the best analgesic results. In the rabbit's stomach, the olive-oil, though, gave rise to gastritis; so, while this oil is known to be practically nonirritant to the human stomach, it was thought that perhaps some mineral oil might possess even less danger of acting as irritants. Accordingly, a good quality of liquid paraffin was substituted, the most satisfactory combination being found to be a mixture of 4 fluidrams of ether, 4 fluidrams of liquid paraffin, and 5 minims of peppermint-water.

The disagreeable features as to taste and smell were overcome in the following manner: One ounce of port wine is placed in a glass and the analgesic mixture in another glass. The patient takes a mouthful of wine, holds it for about thirty seconds, rinsing the mouth so as to get the aroma in the upper air-passages and the taste well established, and then swallows the wine. The ether mixture is then taken and is followed immediately by the remainder of the wine. Several kinds of wine and liquor were tried, but, port wine was found to be the most satisfactory.

In all the patients and the medical men who took this "lower sandwich," as the authors call it, nausea was produced in only one of the patients, a man who was violently opposed to taking the wine. On the other hand, one patient who had had repeated attacks of vomiting, was entirely relieved after taking this remedy.

The authors report on several subjects with painful gunshot wounds in whom the dressings were changed without causing pain or any undesirable after-effects. In about thirty cases, a mixture of equal parts of chloroform and ether in liquid paraffin, instead of the above ether mixture, was employed with much satisfaction.

We believe that this method of producing general analgesia promises much, not only for military, but, for civil practice as well, especially in industrial accidents, and even where operations upon eye, ear, nose, or throat are necessary and are now undertaken under cocaine-anesthesia, but, in which there always is a possibility of ill effects following the local anesthetic. It seems as though the method proposed by the authors would well be applicable to such operations, with the additional advantage that, as it seems, there are no after-effects.

A further highly acceptable application of this general analgesia would be in dental practice, in cases where very painful work has to be undertaken. Many patients shrink from submitting to dental care and work themselves up to such a degree of anticipatory nervousness that harm to the nervous system is unavoidable. This might be overcome or, better, prevented by an acceptable method of general analgesia.

ABSORPTION OF DRUGS AND POISONS THROUGH THE VAGINA.

The vagina generally is regarded as an organ incapable of absorbing pharmacological agents, and the opinion is prevalent among physicians that drugs applied through the vagina exert only a local effect, without being absorbed into the system. It is in agreement with this idea that very potent and even poisonous drugs are employed freely in the form of douches, tampons, suppositories, "uterine wafers," and so on. While cases of poisoning due to absorption of drugs through the vaginal mucous membrane are on record, these are considered to be exceptional and are commonly attributed to other causes, such as, absorption through the puerperal uterus.

Very little work has been done hitherto for the purpose of settling the question of absorption of chemical substances through the vagina, and, for this reason, a report of some investigations carried on by Dr. David I. Macht (*Jour. Pharm. & Exper. Ther.*, Jan., 1918) is of special importance.

Most of Doctor Macht's experiments had been made with cats and dogs, the latter being found by far the most suitable for the purpose, as the structure of the canine vagina, histologically, is almost the same as that of the human female. Doctor Macht experimented with some alkaloids, such as apomorphine, morphine, pilocarpine, atropine, cocaine, aconitine; also with various salts, including potassium iodide, potassium ferrocyanide, potassium cyanide; also with various antiseptics, namely, phenol, cresol, and corrosive sublimate; besides nitroglycerin. These experiments prove that every kind of pharmacological agent—alkaloids, inorganic salts, antiseptics and esters, can be, and are, absorbed with ease through the vaginal walls.

These facts are of great therapeutic and toxicological importance, indicating, as they do, that drugs, such as opium or belladonna, may rationally be administered, for their

constitutional effects, through the vaginal route. Moreover, they point out the possibility of danger from the indiscriminate employment of potent remedies in the form of vaginal douches, tampons, and similar applications. Vaginal applications employing solutions of bichloride of mercury, carbolic acid, cresol, and similar substances, never are free from possible toxic effect. On the other hand, the more recent antiseptic remedies, notably those produced in accordance with Doctor Dakin's investigations, for instance, chlorazene, have been found to be relatively innocuous, while their action is far more pronounced than that of the older antiseptics.

THE SYNDROME OF EYE-STRAIN

A very important and somewhat unusual study of eye-strain is contributed to *The Lancet* for March 2, by Dr. Harold A. Des Voeux, this being based upon 100 cases in his own practice, without reference to the work of other observers. The study of these cases thus was entirely uniform and conducted from a single definite point of view. While thus the objection may be made that the study is incomplete, the results have the advantage of uniformity in observations and evaluation.

Doctor Des Voeux finds that the syndrome produced by eye-strain (including migraine) consists in the following symptoms:

Headache or migraine, which is the most common of all manifestations. It is present in from 60 to 70 percent of the patients and in some constitutes the chief, if not the only, sign, while in others it may be trifling or slight.

Depression of spirits is a very common symptom, being present in nearly 30 out of 100 cases. Usually it seems to be owing either to the frequent attacks and the dread of their recurrence or it may be caused by the incapacity for taking an active part in life or from the necessity of giving up a congenial or a remunerative occupation.

Fatigue is definitely mentioned in the history of about 40 out of 100 cases. It is produced, apparently, by the constant bodily discomfort which these people endure. It is not met with in those who experience only occasional attacks of migraine, but, in those whose mental and physical condition has been lowered by almost continuous suffering or discomfort in one way or another. Fatigue may lead to neurasthenia, unless suitable surroundings and occupation may be found for the patient.

As does the migraine, so fatigue often begins in the morning—a phenomenon which the author finds difficult to explain.

Fears and panics are frequently mentioned by the patients. Fears may consist of an unreasoning dread of what is going to happen, of some approaching catastrophe or impending illness. The panics may take the form of claustrophobia, the patient's fearing being inside of omnibuses, cars or trains, although very often they can ride on the top of the bus or in an open vehicle without being troubled.

Indigestion was frequently complained of and constituted a marked symptom in 30 of the 100 cases. As a rule it was atypical: a want of appetite, distaste for food, and a sense of fulness or slight flatulence; the abdomen, here, frequently is normal, but, may be retracted and small. In some cases, there is definite and severe indigestion, with flatulent distention of stomach and bowels. Constipation may be marked, but, by no means, is invariably present.

Disorders of sleep are very common and are more frequent than is outright insomnia, which latter was observed in only 12 of the patients. Sleep often is heavy, sometimes restless. It may be accompanied by dreams and nightmares. Ordinarily, on waking, the patients feel unrefreshed, tired, and begins the day feeling bad; occasionally dropping to sleep during the day. Giddiness, or vertigo, is frequent, having been observed in from 25 to 33 of the patients: however, no unusual characteristics were observed.

Many of the patients complain of "attacks" the true nature of which may be difficult to ascertain. There may be fainting, especially while in crowded, hot rooms, at concerts, and so on. The diagnosis often is "weak heart" or other weakness. Some seizures seem to be, undoubtedly, petit-mal, and these the author designates as "brain-stop." Train-vomiting is an occasional symptom. It was frequently mentioned by 5 of the 100 patients.

Paralysis of temporary nature is sometimes met with, especially in those in whom migraine is prominent.

Any one of these symptoms may give the clue to a diagnosis in a difficult nerve-case—

a clue which, if followed up by a little cross-examination, often will reveal a heroic struggle against lifelong suffering. A look of intense surprise often comes over the face of these patients as one helps them to dig out the buried past recollections of dropped pleasures and missed opportunities.

Out of 100 patients whom the author studied which includes 35 males and 65 females (showing a preponderance among the latter of nearly two to one), the most complete instances of invalidism were among the women, while several of the men were absolutely incapacitated from work, and the most severe cases of migraine were among them. Eye-strain seems to be a disease that, on the whole, men are more able to stand up against than are women, probably because the former learn early in life more surely to control their nervous system than do women. In women, also, the symptoms tend to be intensely aggravated at or about the catamenia; and, therefore, they are pretty certain to have some kind of attack at least once a month from which a man will escape. The catemenia do not seem in any way to be affected by the complaint.

The patients represented all ages, from childhood up to old age. It must be considered, however, that, when the trouble is recognized in a given case, it may have existed for a long time and that its inception lies back years of the day when treatment is started. Most of the patients, indeed, could trace symptoms back to early youth or childhood. In fact, if the surrounding conditions are favorable to their production, these symptoms will become manifest already in childhood and will become quite pronounced at about the ages between fifteen and twenty-five years. At this period, incidentally, the greatest success in treatment will be attained, no doubt owing to the more ready response of nerve-tissue at this time of life.

Whatever the actual cause of the pain, there can be little doubt that it is some physical alteration in nerve-cells, and that, as years go on, the alteration tends to become permanent and incurable. It follows, then, that every effort should be made to recognize the condition in youth, and, as this is not difficult if sought for, we may hope that in the future the number of these neglected cases will become less.

The condition of the general health of these sufferers indicates no alterations that would account for the symptoms. Quite 25 per cent are otherwise of good, strong physique and appear normal in every respect.

THE CAUSE AND TREATMENT OF EYE-STRAIN.

In the article just above referred to, Doctor Des Voeux enumerates the syndrome produced by eye-strain as: fears, panics, depression of spirits and vitality, "fits", attacks of fainting, functional paralysis, giddiness, dizziness and vertigo, besides fatigue, indigestion, disorders of sleep, and train-vomiting. These symptoms the author finds are produced or, rather, made worse by railway traveling, sight-seeing, going to theaters, being in crowds, railway stations, crowded stores, shopping, race meetings, indoor meetings, motoring, and less frequently by hard and continued reading.

His conclusion is, that eye-strain is induced more by the necessity of frequent changes in accommodation than by a prolonged but uniform use of the eyes. It is for this reason that patients do not suffer when they are out on the prairie or in the open field, It is moreover, observed more frequently in intelligent, educated people, in those who want to see everything and observe things. It is a disease of town-dwellers and brain-users rather than of country-folk or those living in the wilderness. Hence, it follows that the patients always are improved by living in the country, by outdoor exercise, long walks or rides. They can hunt all day and bicycle for miles without harm, but, attendance at a dinner party or concert will induce a severe attack.

The treatment of eye-strain necessarily must be referred to the oculist. It must be taken into consideration, however, that it is the slight degrees of error of accommodation that do the harm, not the extreme ones. This cause of the trouble is based upon the fact that in the case of severe eye defect the patients usually wear glasses that fully correct the deficiency. In case of slight error of accommodation, however, the vision may be satisfactory, and the patients may be unwilling, for some reason, such as vanity, to submit to the discomfort of wearing glasses. They are not conscious of the constant necessity of changing ac-

commodation and, therefore, unduly overtax the muscles concerned.

It may be of interest that, of 77 patients examined by an oculist, 54 were hypermettropic and 14 were myopic, both conditions being almost always combined with astigmatism. In 9 cases, the condition was mixed or varied.

It will be seen that the detection of eye-strain in a given patient is very important, for the reason that drug treatment for the conditions of which patients frequently complain is useless and entails a loss of valuable time. In the presence of one or more of the symptoms enumerated in the preceding article, eye-strain should, at least, be thought of and the patient be referred to a competent oculist, who can determine the presence or absence of this distressing condition.

SACCHARIN AS A SUBSTITUTE FOR SUGAR.

In its issue for February 16, *The Lancet* calls attention to the use of saccharin as a substitute for sugar. The very general use nowadays of saccharin is due to the fact that a section of the public values sugar merely for its sweetness, and not for its food value. If this is a fact, and, if other foodstuffs are taken in sufficient amounts to make the use of sugar as a food unnecessary, the sweetening properties of saccharin will be sufficient, and the sugar saved in this manner may be employed in cases where this substance is necessary for its real nutritive purpose, particularly in young growing children for whom the energy value of sugar is of considerable importance. While sugar cannot be replaced by saccharin for the preservation of milk or the preparation of jams, still, in beverages such as tea and coffee, the use of saccharin instead of sugar will result in an important saving of the latter.

As to the possible harmfulness of saccharin, *The Lancet*, after summing up the available facts, arrives at the conclusion that there is no ground for thinking that saccharin is in any way harmful, while its sweetening power is so great that exceedingly minute quantities suffice to satisfy the palate.

In making use of saccharin, the important point to remember is, that it has no food value whatever and that it can be used only for its sweetening qualities. Whenever the food value is of importance, no substitutes for sugar should be employed.

ON THE SERUM TREATMENT OF DYSENTERY

In the report of a study of over 2,500 cases of dysentery and diarrhea occurring in the British expeditionary force at Saloniki, Dr. Duncan Graham (*Lancet*, Jan. 12, p. 51), says that 95 percent of the dysentery-cases occurring were of the bacillary type. While, thus, the severe cases of dysentery were diagnosed as "clinical bacillary dysentery", a mild form was observed that is designated by the author as "mild recurrent bacillary dysentery", and this was found to be the cause of the diarrhea in a very fair percentage of the cases admitted to the hospital as simple diarrhea.

In several fatal cases of bacillary dysentery, necropsy disclosed a decided dehydration of the tissues, the impression being created that the primary cause of death had not been a primary cardiac failure, but, that the failure of the circulation on the vasomotor side, or "toxemic shock," had been the cause. On the basis of some findings published by Mellanby, that, if the body-fluids are below normal, the absorption of toxins from the intestine goes on at a maximum rate and the absorbed toxic substances exert their full toxic action, the attempt was made to guard against dehydration of tissues, as will appear further on.

Since the symptoms in bacillary dysentery are owing to the absorption of the toxin of the dysentery-bacillus, the author holds, specific therapeutic measures should be directed to the neutralization of the toxin in the most rapid and effective way possible, that is to say, by the intravenous injection of dysentery-antitoxin. It was found that in dysenteria the amount of anti-serum injected must be greater than in diphtheria and tetanus. Where it is impossible to give intravenous injections, the serum should be given intramuscularly, subcutaneous injections having been found to be of questionable value.

The injections of antidysenteria-serum occasionally give rise to severe and even fatal reactions, these being more common in asthmatics and in people who have previously been treated with serum. The author

suggests that asthmatics should receive a preliminary hypodermic injection of atropine. In order to minimize the danger of the intravenous injections of serum, the author's practice has been, to administer a preliminary quantity of 2 mils (Cc.) and then to inject the remainder slowly ten minutes later.

His experiences in over five hundred cases suggest that the best results are obtained from the intravenous injection of from 60 to 80 mils of serum, followed by from 150 to 300 mils of physiologic saline solution twice daily for the first few days and once daily for the next two. In very toxic cases, a 5-percent glucose solution in distilled water should be substituted for the salt solution.

MEDICINAL AND GENERAL TREATMENT OF DYSENTERY

In the article just referred to, Doctor Graham has this to say regarding the general treatment of bacillary dysentery: As to drug treatment, all patients received, on admission, 1-2 ounce of castor-oil, followed after eight hours, in the blood and mucus stages, by 2 drams of either sodium or magnesium sulphate. This was repeated every four hours during the day as long as the mucus stage lasted. After the disappearance of mucus, a sufficient quantity was given to produce a soft movement, with the idea of injuring as little as possible the healing ulcers in the intestines by the passage of feces. There was no indication for the use of opium in any form, as the pain and tenesmus were relieved by the antidysenteria-serum. Intestinal lavage with solutions of eusol, potassium permanganate, protargol, or physiological salt solution was given morning and evening if the patient received relief from them. The use of enemata containing opium, however, is not a rational method of therapy in bacillary dysentery and should be discouraged. Intestinal astringents or intestinal antiseptics by mouth were not used, as they do not tend to improve the digestion or assimilation of the food in the stomach and small intestine. These drugs, if given at all, should be given as enemas.

The dietetic management is the most important factor in the cure of a patient suffering from bacillary dysentery. Serological examinations have demonstrated that second attacks of bacillary dysentery very seldom are new infections, but, rather, relapses from previous ones that have not been cured, either for lack of treatment or because this was not efficient. Changes in the diet must be gradual and the test of cure in a patient before his returning to duty should be: "Can he, while undergoing moderate exercise, withstand the ration he will receive on leaving hospital without experiencing intestinal discomfort?"

In the treatment of the acute phase of the disease, dehydration of the tissues must be prevented, the food must contain sufficient calories for the increased metabolism, and be easily digested and assimilated. The amount of fluid taken by mouth is not sufficient to keep the body-fluids normal or above normal, so that the administration of 300 mils of physiologic salt solution intravenously and a half liter subcutaneously is necessary for the first few days in severe bacillary dysentery. In very toxic cases, the substitution of 5-percent glucose solution for the saline solution has the greater value. This not only provides the required amount of fluid, but, also stimulates the heart and supplies an extra number of calories in the food.

During the first three days, milk should not be given in any form. A suitable diet in the beginning consists of albumen-water, gruels, and clear tea sweetened with lactose. Lactose is of great value, not only for its supply of food-calories, but, also for its favorable action upon the bacterial flora of the intestine. This diet should be gradually changed to one of arrowroot, malted milk, sour milk or diluted fresh milk; lactose dissolved in some fluid being continued.

It is very important to keep the mouth clean by means of washes and the chewing of some solid substance while the patient is on liquid diet. When mucus has disappeared, soft poached eggs and two biscuits may be given, the inclusion in the dietary of custards, pudding, and dry toast being made gradually. Later, a solid diet of chicken, stews, mashed potatoes, peas, and beans may be tried, followed by beef, vegetables, and bread. Untoasted bread is a very disturbing factor and should not be given until the patient is accustomed to a solid diet.

Miscellaneous Articles

Studies on Food Economics

XIII. Cereals, Legumes, Function of Foods

RICE, upon which hundreds of millions of people chiefly subsist, is, by no means, the equal of wheat as a flesh-former, for, it contains a smaller proportion of gluten, containing of it but 6.3 percent as against 15 to 30 percent in wheat. It is harvested much the same as wheat, but, its after-process, among Europeans and Americans, is very wasteful of its nutritive value, because, by a milling-process the outer chaff-coat and the inner gluten-coat of the kernel are both removed, so that this polished rice consists mainly of starch. The Chinese, the Hindus, and Asiatic generally, do not remove the gluten-coat of the rice, hence their ability to obtain nutrition from this grain to a larger extent than we Americans derive from it.

This rice, when cooked, is much sweeter and better as food. However, by the addition of cheese, rice can be made even more nutritious than either wheat or corn. In particular, baked rice pudding is a very nutritious and toothsome dish. This dish, as we all know, is made by adding butter, milk, sugar, and eggs, with an addition of some spice to increase its flavor. In the South, rice often is cooked by itself and eaten in place of garden vegetables, such as potatoes.

The large quantities of rice consumed by the inhabitants of India and other warm countries has often appeared surprising to travelers. This can be explained by the supposition that, owing to the small gluten content, a large amount is required for the wear and waste of the body-tissues and, this same explanation will apply to the large amount of hominy consumed at meals in the southern states. Among our neighbors, one family, of Swedish descent, adds cheese and eggs to hominy dishes—an example that it would be well to follow more generally.

In India, a food called julpan is made with parched rice. This parched rice is much used by those traveling, and also by laborers at hard work.

Rice cakes are prepared as small loaves or biscuits, and these are easily masticated and digested. Rice fritters are very nice, especially when prepared with milk and eggs. Stewed tripe and rice makes a strong dish, while it takes only about two hours for digestion.

Barley is now rarely used as a bread, but, is chiefly used in the preparation of malt for the manufacture of beers and spirits. It is, however, made into bread in certain parts of Wales and likewise in the northern countries of Europe, and sometimes is added to wheat flour in the making of brown bread.

When used whole as food, it is first parched, as, in many districts of India. It was thus given by Boaz to Ruth, and is mentioned at an even earlier period.

It is customary still for reapers, during barley-harvest, to take bunches of the half-ripe grain and parch it over a fire of thorns. The milk being still in the grain, such parched barley is very sweet and is considered a delicacy. Bread made of barley has a dark color, but, although rough, it has a sweetness and a moist consistency that are not disagreeable. Barley is not so nutritious as either wheat or corn, but, occupies a place intermediate between these and rice.

The special quality for which barley is noted, however, is its ready conversion into saccharine matter in the process of malting.

The component parts of barley are much the same as those of the other grains; gluten, starch, vegetable fiber, coagulated al-

bumen, sugar, gum, and the earthy salts, such as phosphates and carbonates.

In order to malt barley it is steeped for from forty to sixty hours. During this period, the grain imbibes about one half its weight of water, and increases about one-fourth in volume, while some carbonic acid escapes. One hundred volumes of barley when immersed in water have been known to swell to 180 volumes. When the grain will shed its pollen, on pressure between thumb and finger, it has been steeped long enough for the process of germination to take place. The grain, having been washed, is laid in heaps on the couch-floor for twenty-four hours. Gradually the grain becomes dry and then warmer by ten degrees, at the same time giving out an agreeable odor. The sweating-stage has now commenced and the germ sprouts. The greatest heat occurs in about ninety hours. The grain loses about 5 percent in weight, absorbs oxygen and gives off carbonic acid. After the grain has properly sprouted, it is removed to the kiln and dried. After drying, it is ground into a coarse meal, when it is ready for use. During this fermenting-process, part of the gluten and starch has disappeared.

As stated before, the outer coating of the grain is a protection from water. Not so that of the germ, and this is where the water necessary to germination is absorbed.

As most people know, *peas, beans,* and the seeds of other leguminous plants are more nutritious, theoretically, than the seeds of grasses, such as wheat, corn, oats, barley, rye. This superiority is due to vegetable casein contained in them. Like animal casein (cheese), vegetable casein, or legumin, contains, per weight, a larger proportion of tissue-forming material and nutriment salts than found in any other vegetable substances. In fact, we believe it the equal, weight for weight, to that of cheese; like the latter, though, it is not readily digested by some persons.

Legumin may be extracted from peas, beans, almonds or peanuts in much the same way that we obtain gluten from flour. The meal of these seed is digested in water for two or three hours. The undissolved portion is strained off by means of a linen cloth and the turbid liquor allowed to deposit the starch which it holds in suspension; it is then filtered and mixed with diluted acetic acid. A white flocculent precipitate is thus formed, which then is collected on a filter, washed and dried. This is a mechanical process, and its liability to variation in results may be learned by anybody who will repeat it or who has separated the gluten of flour.

Practically regarded in relation to our present subject, casein of cheese, and legumin of peas, beans, et cetera, may be considered as the same. Their nutritive values are equal and exceptionally high, supposing they can be digested and assimilated. The one is the most difficult of digestion of the nitrogenous constituents of vegetable foods, and the other enjoys the same distinction among those of animal foods.

Both, casein and legumin, primarily exist in a soluble form; both are rendered solid and insoluble in water by the actions of acids. Both are precipitated as a curd by rennet, and both are rendered soluble after precipitation or are retained in their original soluble form by the action of alkalis. They nearly resemble each other in flavor. In China, cheese actually is made from peas and beans.

The couplet, so old that its origin can be be traced equally among the Semitic and the Aryan races—

> Peas-pudding hot, peas-pudding cold,
> Peas-pudding in the pot, nine days old—

has great practical wisdom in its lines.

One of the curious achievements of chemical metamorphosis is, the turning of old rags into sugar; likewise, into that beautiful substance, celluloid. Our wonder will be diminished and our interest increased when we remember that the cellulose, or woody fiber, of which the rags are composed has the same composition as starch.

The demand for the solution of the vegetable casein, or legumin, which has such a high nutritive value and is abundant in beans and peas, is met by soaking them for many hours in water to which has been added bicarbonate of potassium. Acids coagulate and harden the casein; alkalis soften and dissolve it. Hence, in cooking either peas or beans, an alkali should be added, as it is a wholesome addition and is compatible with the demands of nutrition.

Bicarbonate of potash is the one that best fills the bill.

The analysis of peas, beans, and other legumes, shows a deficiency in potassium,

as compared with the quantity of nitrogenous nutriment they contain. Therefore, in the form of casein, vegetable or animal, we should add potassium, in the convenient and safe form of the bicarbonate—not merely add it to the water in which the peas are to be boiled and which is thrown away (as is the common practice when adding soda in boiling cabbage or greens), but, add the potassa to the actual peas-pudding or Boston baked beans, and treat it as part of the food; it having a greater value than table salt. This is especially requisite when we cook dried peas and beans.

Taking the ordinary yellow split peas and boiling them down in a weak solution of bicarbonate of potassium for about two or three hours, a partial solution of the casein is effected, producing peas-pudding or peas-porridge (according to the amount of water used), this being softer and more gelid than that obtained without the addition of potassa.

The undissolved portion consists of the fibrous tissue of the peas; the gelatinous or dissolved portion being the starch, which contains more or less of casein.

As stated in a former paper, the skins of all seeds are indigestible. This is one of the reasons why cooked dried peas and beans disagree with so many people of poor digestion.

While the skins of seeds are not digested, they readily undergo fermentation when subjected, in mass, to heat and moisture combined. To overcome this difficulty, dried peas and beans should be soaked in sodium-bicarbonate water for some hours, then rubbed with a coarse cloth in water, so as to separate the skins from the seeds. This will be objected to by some, for the reason that peas and beans, being unprotected by their skins in the prolonged cooking they require, will break down into pudding-like masses not very inviting in looks. However, this difficulty may be overcome by using a double kettle or a "fireless" cooker. The result obtained will more than pay for the extra trouble.

Captain Cook, in his three-years' voyage around the world, invariably made his men partake of vegetable messes, which he had the cook concoct from such plants as his botanist told him were wholesome. By doing this whenever he reached any land, he prevented an outbreak of scurvy—the then scourge of long journeys.

The succulent fresh vegetables and fruits contain a large percentage of potassium, as do also fresh meats. Salt meats part with much of theirs in the brine; which will explain the great longing for fresh vegetables when one for some time is deprived of them in any quantity. In white flour, we lose much of the valuable salts in the bran-refuse we feed our stock. Our city-kept horses must be furnished ashes and salt in order to keep them in perfect health. Also remember how animals, in the winter, enjoy their ensilage fodder.

These are lessons we should learn and, as a consequence, pay less to the doctor.

The Function of Foods: Before proceeding any further on the subject of special foods, their constituents, and preparation, we will consider briefly the function performed by the two principal classes of foods, namely, heat producers and energy-producers.

All oxydating processes result in production of heat, more or less.

Some food stuffs are more readily oxydized than other kinds—the fats, starches, and sugars, for instance.

It is generally assumed that our nitrogenous foods are the most important, inasmuch as they furnish the material for the upbuilding and sustenance of our body-tissues. But, this assumption, without proper explanation, is incorrect.

Besides the gluten of plants and seeds, which supplies the materials from which the muscular parts of animals are formed, there is the oil, which is converted into fat in animals, and the saline and earthy matter of plants, which supply the salts of the blood and the earth of the bones. Only about 25 percent of the whole grain of wheat consists of gluten.

What purpose, then, is served by the non-nitrogenous, or carbon, portion of our food, such as starch, sugar, fat, oils? Is it taken into the stomach and again rejected, or is it decomposed and made to serve some vital purpose in the economy of the living animals?

From the fact that so large a part of vegetable food consists of these substances, we must infer that they are destined to serve some important purpose in the animal economy. As a matter of fact, they are, to

the herbivorous animal, almost necessary for the support of a healthy life.

In order to understand this fact, it will be necessary to advert briefly to the respiration of animals. All animals possessed of lungs alternately inhale and exhale atmospheric air. They breath or respire. The air they draw into their lungs, supposing it to be dry, consists by volume, of 79.16 percent nitrogen, 20.80 percent oxygen, and 0.04 percent carbonic acid. The proportion of carbonic acid, we see, is very small. However, as the air is breathed out again, it consists of 79.16 percent, nitrogen, 16.84 percent, oxygen, and 4 percent carbonic acid. Thus, the proportion of oxygen is considerably less, while that of the carbonic acid very much greater than before. Consequently, on an average, the natural proportion of carbonic acid in the air is increased 100 times after being exhaled.

In breathing, the animal throws off into the air a quantity of carbon that varies at different times, and in different animals. For a healthy man, the quantity of carbon thus thrown off varies from 3 ounces to 13 ounces; for a cow or horse it is from 3 to 5 ounces, in twenty-four hours. All this carbon is derived from the food.

Animals, including man, therefore, eat, not merely to support or add weight to their bodies, but, to supply the carbon wasted in the life-processes and removed by respiration.

How is respiration supplied with carbon? In the animals that live on flesh—carnivorous animals—it is the fat of their food from which the carbon given off by their lungs is derived. It is only when the fat fails in quantity that the lean, or muscular, part of the flesh they eat is decomposed; for, the flesh eaten is decomposed in the lungs, for the purpose of supplying carbon. But, fat is not the only source of the carbon of respiration.

As stated before, all life-processes are oxydizing processes. Now, one of the functions of the liver is, to produce sugar. This sugar is stored up in the muscle-fibers. Whenever any muscular effort is put forth, there occurs the production of energy and heat and the decomposition of sugar is the source of the resulting energy, heat, and the carbon of respiration.

Had the writer to train Jeffries, the pugilist, he would have given him no other food, for twenty-four hours, but sugar. The Negroes, with but scant book-learning, but with much labor experience, take sweetened water to drink while they perform hard manual labor. When an animal receives no food for the time, the lungs are fed, so to speak, from fat, also. But, in this case, it is the living fat of the animal's own body.

When digestion is fully performed and hunger is again felt, the body begins to feed upon itself—the lungs still play, as respiration continues for a long time after food has ceased to be taken. Carbon still continues to be excreted by the lungs, but, this carbon is obtained at the expense of the fat, and next of the muscular tissues. Hence, the emaciation that follows a prolonged abstinence from food. On the other hand, in animals that live on vegetable food—the herbivorous animals—it is the starch, gum, sugar of the food that supplies the carbon of respiration. It is only when the food does not contain a sufficient supply of these compounds that the oil first and then the gluten are decomposed and made to yield their carbon in respiration.

In extreme northern climates, both animals and man call for much fat as part of their diet. On the other hand, in Southern lands, sweet foods are much called for, and such should be eaten in preference to fats. Fat is proportionately a greater heat-producer than sugar. Hence, as a diet in the South, very little food is required for building-purposes, and much less for heat; hence, fruits should be given the preference over much meat, especially with regard to the diet of men and women of sedentary habits.

Much of the writer's practice consists in treating ills the result of improper feeding by the patients. Would men be healthy, let them care better for their bodies, studying their requirements.

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CURRENT COMMENT BY A COUNTRY DOCTOR

Pituitary Substance.—In an editorial on the abuse of pituitary extract, *The Southern Medical Journal* presents a timely and emphatic discussion of that subject. Never does a drug come into general use in practice but that misuse of it follows, or accompanies its proper employment. In

the first place, too much is expected, in the second, there is a tendency to employ therapeutic agents just because they are "good for" something or other. And this, without any careful consideration of physiological action, both usual and possible under conditions variant from the ordinary. The editorial mentioned calls attention to the fact that not only will pituitary extract under certain circumstances shorten labor, but, that under conditions of contraindication it will shorten human life as well—by causing immediate accession of the patient to the ranks of the spirit world.

No man is justified in using this potent agent merely in order to shorten labor, with a view to saving himself time. Given proper presentation, dilatation, diameters, and reasonably certainty of no fetal impediment, and the shortening of labor by means of the pituitary substance becomes justifiable; nay, desirable for mother, child, and accoucheur, all of whose individual vitality is becoming exhausted in varying degrees. However, if the mother be a *primipara,* the writer would hesitate long before resorting to the agent and forcing the pioneer through the parturient path, as yet untrodden on the outward-bound way. Circumstances do arise, however, justifying use of pituitary substance; but, when using it in a *primipara,* it is well to remember that a bistoury, a grooved director and a combination of quick action and good judgment can make a lateral cut of much easier repair than a lacerated perineum. With *The Southern Medical Journal,* agreement is had most completely in the contention that attempting to correct malposition of a fetus or to dilate a rigid os with pituitary extract is a sin both of laziness and incompetence. Be sure that the indications exist, then give a fractional dose, and repeat if sufficient contraction does not follow. Being assured on these points and administering in this way, we may get relief for the mother and the wornout attendants. There is no glory in leaving a woman in drawn-out agony just because her mother suffered likewise at her birth.

We must remember to give a balanced look at the two ways to consider labor under modern environment: the view as a natural process and the consideration as a pathologic one because of age, of waist compression, and manifold other unnatural habits indulged in since male and female man began assuming the erect position.

Pituitary substance, like our other powerful agents, has a force-loosening power that may be used either for good or for evil. Incidentally, it is well to remember that the uses of this animal product are not limited to obstetric employment, but, that it will serve to stimulate and contract a womb at any time such procedure is indicated, although the transient effect should not be depended upon to the exclusion of the drugs of vegetable origin, which must be relied upon to get maintained effect. Also, the agent may be employed to stimulate intestinal peristalsis, especially in order to expel gas—here, also, it is desirable to be sure that one desires the positive action of the drug before resorting to it.

Pneumonia.—An unusual amount of pneumonia this season, has, fortunately, awakened much discussion as to its treatment. Always yet the voice of nihilism is heard, still, the consensus seems to be that this disease requires treatment; much of it, yet, not too much. The writer charges the pneumonia hosts on suspicion, hoping that the case will prove, *"not to have been pneumonia, anyway."* This means that, if the patient is seen early, start is made with calomel, bilein, and podophyllin, following with a laxative saline; while, at the same time, belladonna or atropine may be temporarily pushed, in the hope that, by throwing the circulation to the periphery, beginning congestion may be relieved. With the disease established, aconitine combined with strychnine and digitalin—the "dosimetric trinity"—is given, thus getting early stimulation and heart reinforcement. Calx iodata is given throughout after the initial cleanout of the alvine tract. Lobeline is given in combination with such other sedative and expectorant remedies as seem best indicated in order to keep cough loose and little annoying to the patient. Ammonium chloride must here be thought of. With a very hard pulse and high fever, veratrine is added to the treatment or substituted for the aconitine; gelseminin or a tincture of gelsemium, both of its alkaloids being here desired, may be used in place of the aconitine in early stages.

The external treatment is considered of importance and it usually consists of frequent sponging off with a magnesium-sulphate solution to which has been added a

little creolin or other preparation of the cresolic group. This, together with inunction of the chest with guaiacol, fluid extract of bryonia, and fluid extract of lobelia, in a penetrating base (lanolin and also tragacanth dissolved in whey are excellent) are the writer's most usual combinations, although counterirritation is, at times, conservatively employed. No heavy dressings or applications are used, the cotton jacket or frequently changed undershirt beneath the nightgown being sufficient protection, and avoiding undue weight on the already overburdened thorax.

During the deficient oxidation of pneumonia and the concentration of the forces of nature to repel attacks elsewhere, the remainder of the intestinal flora will be lost, and "intestinal antisepsis" should be carefully looked to. The mixed sulphocarbolates without the zinc salt here come in well.

Wandering and unusual infections should be watched for. The pneumococcus type of meningitis is worse than the cerebrospinal epidemic form. Ear complications should be given careful attention, drum perforation being made if bulging shows; thus a lessened likelihood of a dammed-back infection will be insured. Recently the writer saw, in consultation, a case of sudden onset of jaundice in a convalescent lobar-pneumonia patient. Subnormal temperature was present, low delirium, and suppression of salivary secretions. A fatal outcome was rapid, the patient failing to respond to stimulation and efforts to reestablish secretions. Evidently a pneumococcus-infection of the gall-bladder, with a previous catarrhal condition of the duct.

During convalescence, increasing nutritious diet, as the stomach will bear it, and tonic treatment, with nuclein and the iron and magnesium phosphates serving well, are the indications.

Every case is, of course, one for individual requirements, but, the outlined treatment has in the hands of many given good results. It is hardly necessary to dwell upon the necessity for good ventilation while those diseased lungs are struggling for air: what they can get should be pure and the neighbors who fear "ketching more cold" from the judiciously supplied abundance of fresh air should be read a lecture in the presence of the sick one's family.

Dichloramine-T.—Dakin's solution (chlorazene) marked a great advance in treatment of infected wounds and other bacteria-laden lesions, but, dichloramine-T marks another advance in this line. The use of a comparatively nonirritant chlorine-freeing substance in oil base, not requiring frequent renewal, is one more step toward perfection in "bug fighting." The writer has been trying out this new agent in genito-urinary work, and so far with marked success. One case of eroded cervix resulting from an old tear and subsequent irritation and infection looked so bad that immediately the thought of cancer presented itself. Engorgement of the womb was relieved by means of suppositories of dehydrated magnesium sulphate, with every night and morning hot douches and then dichloramine-T employed. The douche was first given, then the cervix was dried, and the application was made through a speculum, by means of a piece of gauze, with a dressing-forceps, a light tampon following. A 2-percent solution was used and applications were made daily for three days, then on alternate days for eight days more. Examination of the patient after a month of treatment shows apparently normal conditions, except for the scar of the laceration, operation for repair of which the patient has refused; hence, of course, a return of her trouble may be expected.

If the few cases of male gonorrhea thus far treated are to be followed by equally good results, dichloramine-T will become a routine remedy in the writer's treatment of this trouble. The agent may be applied by means of a strip of gauze or candle-wicking, either through a urethral applicator or by means of a small probe. It takes trouble and time to introduce, but, it can be done and the probe withdrawn while the finger pressure retains the packing. Make the application immediately after urinating and have it retained as long as possible. It must be remembered that acute gonorrhea is an anterior urethritis, unless an old infection has been awakened, hence, the packing need not be carried back very far. Judgment will here be used in each case.

One case of double infection—chancroid and gonorrhea—gave remarkably satisfactory results. A chancroid involved the head of the glans, eating into the meatus It was a nasty case, involving two units of the unholy trinity of venery. The chancroids were given initial cauterization with nitric acid, then the treatment above outlined. The patient was discharged this day,

cured of both disorders, after fourteen days of treatment. Internal treatment had been addressed to the gonorrhea, also. Dichloramine-T seems to have great possibilities in the treatment of the lesions of venereal infections.

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MODERN TREATMENT OF SUMMER DIARRHEA

In the summer and fall months, the general practitioner has many cases of flux to contend with, every form of diarrhea and dysentery usually being seen during this season of the year. Unless intelligently and promptly treated, these disorders are liable to assume a chronic form, from which the patient may be long in recovering; in fact, in a few instances, they never fully recover, being left in a state of semiinvalidism and an easy prey to some fatal malady, such as tuberculosis, hepatic abscess or chronic eczema. Consequently it should be the aim of the physician to terminate the disease in its acute stage. Of course, as a rule, these summer diarrheas, if seen early and treated intelligently, will end with the acute stage, unless there is some underlying constitutional taint or disease that prevents a cure. However, if neglected, they become difficult to manage and may hang on a long time, causing the physician in charge much worry and bringing but little professional credit. In the following, I will outline a plan of treatment that has served me better than anything I have yet tried. It is understood, of course, that no specific rule or plan of treatment can be formulated to suit every case, still, this treatment can be varied to meet almost any condition that may arise.

Acute Enterocolitis.—In an acute attack of enterocolitis, the patient, first of all, is put to bed, in a well-ventilated room or as good as the environment and circumstances will allow.

The patient (adult) is now given one granule of 1/800 grain of aconitine hydrobromide every twenty to thirty minutes, until the skin becomes active, the arterial tension is lowered and the temperature declines; then they are given, as indicated, one, two, three or four hours apart, or are withdrawn altogether. If there is much tenesmus, give one granule each of emetine (gr. 1/64) and atropine (gr. 1/500) every half hour until all straining at stool disappears, unless mouth and throat get too dry, in which case the atropine is to be withdrawn. Withhold all food for twenty-four hours, at least, and longer if thought necessary.

Indeed, I know of no measure that brings such brilliant results in cutting short these diseases as the complete withdrawal of every kind of food for a period of at least twenty-four or thirty-six, or even up to sixty-two hours, as the physician may consider advisable. Always make this period of abstinence long enough, for, no patient is going to suffer any great inconvenience from a fast so short as here suggested; and under no circumstance permit yourself to be influenced by parents or friends to shorten the time when your judgment tells you that you are right.

The feeding of children, and of adults as well, when the alimentary tract is diseased, is a grave mistake in acute affections. Yet, parents and friends are likely to insist upon it and to make a great ado when the doctor prohibits giving any food whatever for twenty-four or forty-eight hours: "the doctor is trying to starve them to death." If the sick child is vomiting, water, also, should be withheld until the vomiting ceases, while even in those cases in which there is no vomiting it should be given but very sparingly.

When there is vomiting, a little crushed ice should be administered cautiously, to allay the thirst and heat. Give 1-10 grain of calomel every twenty to thirty minutes until one or two grains, according to the age, have been given, then, two hours after the last dose, give a good dose of castor-oil or laxative saline. Once the bowel has been thoroughly cleared, and you are sure of that, then start with the combined sulphocarbolates, continuing until the stools are odorless. The abstinence from every bit of food, the thorough cleaning-out of the intestinal tract and the rendering of it aseptic will effect a cure in the majority of cases.

If the patient has been seen late or if the attack does not yield to the foregoing treatment, then proceed as follows: Flush the bowel out once daily with physiologic salt solution, then give a combination of zinc and codeine every two or three hours. If pain is severe, the modified hyoscine-morphine-cactin granules may be administered by the mouth or, for adult patients,

the regular tablet, formula No. 2, can be given hypodermically.

Chronic Enterocolitis.—Should a case of enterocolitis be one of long standing, the patient greatly emaciated and bordering on collapse, give small doses of atropine, brucine or strychnine, often repeated until reaction sets in. Also, push nuclein, to sustain vitality and to increase the hormones of resistance.

For frequent serious evacuations, I know of no better remedy than copper arsenite, given in small doses and often repeated, to effect. It must be given in solution.

Dysentery—In the case of dysentery the treatment, in the beginning should be very thorough in order to cut the disease short and thereby prevent it from becoming chronic. Prescribe as follows: Aconitine for high arterial tension and elevated temperature, atropine and emetine in full doses to control the tenesmus; then small doses of calomel every fifteen minutes until 1 1-2 to 2 grains has been taken; then, in one hour from the last dose of calomel, give a full dose of citrate of magnesia, castor-oil or a laxative saline—the latter to be repeated if there is any question as to the alimentary canal being entirely cleared of any offending material it contains.

If the patient is seen early, everything is now in readiness to bring the case to a close. A full grain of emetine is given dry upon the tongue and then the patient is to be kept very quiet, with head very low, and encouraged to go to sleep. In most instances, a genuine ipecac-stool will be produced in eight to twelve hours, after which recovery will promptly follow, provided the patient is carefully dieted and given the necessary tonic treatment.

The emetine, I must mention, though, should never be given if the patient is in the least nauseated. Or, if the patient should vomit the first dose, then the stomach should be prepared for it by administering menthol, and, if necessary, cocaine. A tablet of menthol placed upon the tongue and dissolved slowly, and repeated if necessary, will usually be found sufficient. The after-treatment should be directed with a view to building up the patient as rapidly as possible, so as to prevent relapse or the development of some other disease. And, among our best tonics for this purpose, will be found strychnine, brucine, sanguiferrin, and the combined arsenates with nuclein. Patients placed upon one or more of these tonics and carefully fed will soon be gaining strength and flesh.

One word before I close. Every now and then, an ulcerated condition of the lower bowel will develop and cause a great deal of worry and suffering. If these ulcers are low enough down to be brought into view, they should be touched with a solution of silver nitrate; if too high for this, a douche of a weak solution of the silver should be given. Better still is a douche of chlorazene, of between one-fourth and one-tenth percent, according to the age and condition of the patient.

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MODIFIED PERCY TREATMENT OF CANCER

As usual, the April number of CLINICAL MEDICINE contains its splendid editorials. The ones regarding x-ray and radium in the treatment of cancer are good and the query concerning magnesium sulphate à la Burgess is applicable. We have tried it with probably too little faith and for too short a time, but, one dislikes to waste time in these cases. Doctor Burgess' advice to use magnesium sulphate locally has done more for my practice in the past twelve years than any other measure I have ever used. All glory to Doctor Burgess.

What I started to write about is something new, yet, not so new regarding the treatment of cancer. In your suggestions as to the treatment of cancer, don't forget Dr. J. F. Percy's cautery method. It is ahead of the scalpel in the majority of cases and will destroy cancer where one dares not go with the knife. But, newer still is the ultraviolet light for surface cancers, and I am not so sure but that I may find it extremely useful for those affecting the interior of the body.

My method, and one which is giving present results, is a combination of Percy's cautery and ultraviolet light. The cancer is first thoroughly "cooked" with the Percy cautery, then I start, about three days later, with the Kromayer lamp and give daily treatments until the lesion is brought under full control, when it is treated less frequently.

T. HOWARD PLANK.

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[This method appeals to us in the case of newgrowths that are get-at-table, but,

what are you going to do in the case of socalled inoperable cancer? In this condition, neither the knife nor the cautery will avail. Just now, the present writer is watching with deep interest a case of abdominal cancer that is multiple and can not be reached either with knife or cautery. Some months ago, the symptoms were very urgent and an unfavorable outcome seemed near. The pain and distress were relieved by means of radium, the action of which was supplemented by the x-ray and also the high-frequency current. In time, it was found necessary to reduce the dose of both materially, and at present the patient is very comfortable and is, in fact, regaining ground that had been lost in the course of several months.

In order to overcome the severe anemia, blood transfusion is being done, small amounts of blood (100 mils) being injected by the method of Doctor Abelmann, of Chicago, by the originator himself. At present, the outlook is surprisingly favorable, and the expectation is justified that the life of the patient will be prolonged for a long time. Some day we expect to report on this case in greater detail.—Ed.].

WOMAN, AND MAN'S IMMORALITY

I prize The American Journal of Clinical Medicine very highly and should be sorry to miss any numbers of it. The February number was especially interesting to me; and, being a woman, I want to thank Doctor Eskridge for her letter, especially as it brought out such a manly editorial comment.

If every man and especially every doctor could truthfully say that he thought, believed, and felt that "the American woman is something so fine and precious that it is up to us men to protect and shield her, every one of her, from everything harmful or unworthy", then, oh then what more could we want or ask for? And what a host of world-wide and age-old problems there would be solved!

I have always held that the one inalienable right, God-given, of every woman was, the right to reverence manhood and man; but, tell me how an intelligent, high-minded, pure-hearted woman can reverence, for instance, the one of the twelve doctors in my girlhood home who introduced horse-racing into that town and afterward boasted in my father's hearing on the street that he alone had sixty young men under his care as a consequence of other things introduced with the horse-racing? And how could an intelligent girl with high ideals—knowing then, as well as now, after years of study and practice, the outcome of it all—how could such a girl link her life and the destiny of the future with one of those deluded foolish victims?

Oh, yes, I have tried to live up to Meredith's ideal of woman: "The mission of genius on earth! To uplift, purify, and confirm by its own gracious gift the world, in spite of the world's dull endeavor to degrade and drag down and oppose it forever. The mission of genius: to watch and to wait, to renew, to redeem, and to regenerate. The mission of woman on earth: to give birth to the mercy of Heaven descending on earth. The mission of woman: permitted to bruise the head of the serpent, and sweetly infuse through the sorrow and sin of earth's registered curse. The blessing which mitigates all; born to nurse and to soothe and to solace, to help and to heal the sick world that leans on her."

Thank God that I can feel, after thirty-seven years in the rough and tumble of battle against heavy odds and with many handicaps, that I have not altogether failed. And that "I would not, if I could," change the path I have trod.

Yet, not woman, nor women, but, the seed of the woman, the Divine Christ, is the only hope of salvation from earth's desolation. I have pondered and studied and brooded over, especially, these moral, social, sex, and venereal problems for years. And for years I wondered why into the genealogy of the Christ had entered so much evil. As, Rahab the harlot of Jericho, Ruth the Moabite, and through her back to the historic venereal plague of Baalpeor, where twenty-three thousand died in one day, on back to the incest of Lot's daughters, and then down to David and Uriah's wife; but, a study of vaccination anad serum-therapy, with the principles underlying them, has completely solved the problem and flooded the Divine plan of salvation with dazzling light for me, amplifying and extending, to my mind, Drummond's "natural law in the spiritual world", Christ the lamb without spot or blemish, immune to sin, yet, made partaker of all manner of sins, that his life, his blood might save us who accept and receive that life from sin, thus becomes no more a mystery than the

saving of our army from typhoid fever by vaccination.

Further, I believe there is no other solution for venereal problems than the inoculation of the moral nature with the Christ-life, so that the whole moral nature is transformed, until sin is impossible because there is nothing in one's nature to respond to temptation. Man may seek out many cunning inventions, but, God will not be mocked. They who sow to the flesh shall of the flesh reap venereal disease and death. And those who overcome temptation, through "the blood of the Lamb," will be given the crown of Life—Eternal Life.

Conant, Fla. OLIVE E. W. SWAN.

POTASSIUM BICHROMATE FOR VENEREAL WARTS

I hope you will pardon my coming again to the front; I almost feel ashamed to speak so often, as the younger men should now take the field. However, I would like to add to the remedies you suggest for vulval verrucæ, or venereal warts, the use of potassium bichromate. I have repeatedly obtained very happy results from simply moistening crystals of the chemical with water and applying to the warts until they were the color of the remedy itself. In a few days, after one or two daily application, the excrescences disappear.

C. S. COPE.

Detroit, Mich.

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[Doctor, please do not stop writing on the plea that the younger men should now take the field. The younger men are very busy working up, and attending to their practices; to the older men we look for counsel and advice. I do not mean that we do not want to hear from the former—very much the contrary. We want to hear from everybody who has something good to say. That includes the youngsters and the oldsters. More power to all of them. So, come again, doctor.—ED.]

A PUZZLING CASE: ECHINOCOCCUS-CYST?

What do you make of this? A woman of fifty years, married twenty-five years, had no children; several of her family died of dropsy, otherwise her family-history is good. She was seen first June 29, 1917, when I found her recovering from a faint, or more probably, shock due to a ruptured cyst. She was much reduced in weight and of very brown complexion. She was as well as usual after a few days. I saw her again on August 6 and found her suffering from a pain in the region of the gall-bladder. Her liver was greatly enlarged downward and a vague pain had existed in this region for at least a year. A tentative diagnosis of malignancy of the liver was made and concurred in by a consultant.

A few days later, an abscess (or cyst) ruptured into the intestinal tract, which immediately reduced the liver and ushered in a very severe attack of inflammatory rheumatism. She was sent to the springs as soon as possible and got much relief, although no gain in weight. She slept and ate well, but, continued weak, until, on Janary 21 (1918) general dropsy began to develop. She died February 28, and the necropsy revealed many cysts of the liver, the largest unruptured one being about as large as a small baseball. No other evidence of malignancy was found.

C. F. FLETCHER.

Summan, Ind.

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[On being asked what treatment had been instituted in this case and what was

the nature of the liver-cysts found, the Doctor replied that the cysts were very tense, with thin, tough, transparent wall and containing a thin yellowish clear serum. There was no evidence of daughter cysts. No chemical or microscopical examination was made. The liver was knotty on the surface and the doctor, as also his consultant, believed the affection to be malignant, probably cystadenoma. The treatment had been purely symptomatic.

We can not quite agree with Doctor Fletcher in his opinion that the disease was malignant in character. We miss especially any reference to the cachexia, which is so marked a terminal symptom in malignant disease, and to the characteristic pain. Also, no reference is made to metastases, which occur invariably; in fact, malignant growths of the liver are themselves, as a rule, secondary to a preexistig affection elsewhere, especially in the kidneys. A pathologist friend informs us that the occurrence of metastases could not be overlooked at the necropsy, because they would be made up of liver-cells, and these would function, producing bile, and, therefore, be stained green on section. The point would not escape the attention of the operator on postmortem examination.

The tentative diagnosis that occurs to us as most probable is, echinococcus cyst; and the description of Doctor Fletcher's case, while incomplete, tallies far better with those found, for instance, in Delafield and Prudden's textbook on pathology than it does with the accounts of malignant disease of the liver. If we assume echinococcus to have been present, the rupture of a cyst into the intestinal tract would, in fact, have been followed by a severe nervous toxemia, the symptoms of which simulated those of acute arthritis. Unfortuately, the necropsy investigations were not carried far enough to settle the points at issue. However, it seems to us that the diagnosis of echinococcus-cysts is better founded than that of malignancy.—Ed.]

NONOPERATIVE RELIEF OF UTERINE ADHESIONS

The following case may be of some interest to some of your readers.

A woman called me March 15, saying she had not been able to void urine for about twelve hours. After catheterizing, an examination disclosed the presence of uterine retroversion, with adhesions. The cervix was at the extreme anterior part of the vault of the vagina, the fundus was immovable and in the hollow of the sacrum. Her last menses had occurred on the first of January. The patient is thirty-three years old and has been married fifteen years. She states that she had a miscarriage during the first year of her married life, in the second month, but, has not been pregnant since then. Nine years ago, she had abscesses and was sick a long time and her attending physician advised operation. She says the abscesses discharged through the vagina and her doctor told her she never could become pregnant because of the uterus being "upside down and grown fast to the back." I was called in again three or four times to catheterize, and each time I tried to press the uterus forward, both through the vagina and through the rectum, but, could not move it at all. I advised the knee-shoulder position, with deep breathing, and also walking on all fours, a dose of epsom salt daily, and a saline enema.

Another physician was called, on April 4, when I could not go to relieve her, and he, after an examination, expressed the opinion that the uterus could not empty itself in case of an abortion, also that a pregnancy surely could not go to full term unless the adhesions first were destroyed by an operation.

Then, April 11, I gave, hypodermically, one ampuleful (2.3 mils) of fibrolysin and, on April 12, a second dose of the same, acting on the theory that, if it would quicken the absorption of exudates and scar-tissue, it might help in this instance. I taught the husband how to use the catheter and did not see the patient again until April 20, when I called at the house to see how she was getting along. She told me that she had been quite sick and almost had sent for me, but, had grown somewhat better. She had pain in the back and spasmodic pains in the pelvis during April 14, 15, 16, and 17 and remarked to her husband that she felt "things were changing inside."

An examination showed that the woman was right. The cervix now was posterior, while the fundus felt softened and in its correct position.

Question: Did the fibrolysin do this or did pregnancy release those adhesions?

Sara T. Chase.

Traverse City, Mich.

[We are inclined to reply to both questions in the affirmative. It is on record that, when incarcerated in the lower pelvis, through malposition and adhesions, a womb has righted itself as it increased in size during pregnancy. In this instance, the adhesions seem to have been unusually firm, and it is very probable that the fibrolysin softened them so that the fundus of the enlarging uterus could rise above the brim, being assisted therein by the knee-shoulder position and the exercises on all fours, as the patient had been directed to take.

We are much impressed with the beneficial action of both of the latter factors. The knee-shoulder position, when regularly and persistently assumed just before retiring, is a potent aid in correcting prolapse of slight degree, and certainly it relieves the strain upon the ligaments. Walking on all fours tends to have the same result. Altogether, we congratulate Doctor Chase upon her successful management of this case which otherwise might have taken an entirely different turn.—ED.]

THE NEED OF IDEALS

Your article in the April number on typhoid fever awakened me to the fact that I am delinquent, so, I am sending you my check for the full amount. The ten cents extra is to cover postage wasted in reminding me of my duty. I full well remember twenty-five years ago when you started with a little sheet—*The Alkaloidal Clinic*—but, if small, it was full of good sense and ebullient enthusiasm. More—it stood for an ideal.

Alas! if we all could, early in life, just get an ideal. In this age of transition, the great leaders and thinkers should, like yourself, have more to say about ideals. I never was taught any, or, at least, not in such a way as to fasten themselves upon me so strongly as to make them the very light and guide to my pathway, so that all obstacles would become trifles. But, now, at a late age, I see some light, and I behold that "if thine eye be single thy whole body shall be full of light."

So, I would like to ask, if the great government of the United States is going to take over the public utilities. why not take over the medical profession as a whole, and eliminate that which is of the charlatan order and demand of that which remains results, efficiency, scholarship. The medical profession is the people's greatest utility. Today, we doctors should be amply paid by the government and required to take care of the children in the schools, as of our own, and instruct them and their teachers about the common rules of health, remove diseased tonsils and any adenoids; correct poor eyesight; we should have access to the churches and councils and assert ourselves in the midst of all the confusion, folly, "isms" and "pathies" that are preying so harmfully upon the unprotected people of this nation at this time.

It requires order and authority to bring cosmos out of chaos, truth out of error. While I am away out here in a remote nook, far removed from the great centers of thought and motion of this nation, yet, I can faintly see that after this bloody cataclysm is over, if the world really is to be improved and if all this blood and suffering is not to be in vain, it will be because those of us who are left will have a new and higher ideal and will all cooperate and each joyfully play his part, whether high or low, in an unselfish effort to do what we can for the general advancement of all.

While this is not written for publication, still, I hope that there may be some word or thought in it that will inspire you to give us a leading thought in the right direction.

WALTER C. COX.

Hartline, Wash.

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[The Doctor's wish, that we all could follow an ideal, beginning early in life, is well put. His remark has made us think about ideals and we shall endeavor, some time in the near future, to put these reflections on paper.

It is hard to surmise just what will develop through this war and after it. Opinions are being voiced here and there that the social and economic position of physicians will be materially altered. Some men refuse to consider that it is possible for the old relations to be restored and hold that it will be unavoidable for the government to "take over" the medical profession, for the reason, as Doctor Cox suggests, that it really is a great "public utility." However, there are so many points

in this possible and some say unavoidable change that we hardly can discuss it in any detail. Without a doubt, however, there is a distinct trend in that direction, and we, even the older ones of us, may witness the actual change.—ED.]

MASON, NOT NASON: A CORRECTION.

Dr. T. R. Mason calls our attention to an unfortunate typographical error that occurred in connection with his article, entitled "Oldtime Emergency Surgery," that appeared in CLINICAL MEDICINE for April, on page 299. The article should have been signed Mason, instead of Nason, as printed We will ask our readers to enter this correction in their copies of the journal.

DIDONK: A NEW WAR SLANG.

A new slang word seems to be creeping into our everyday speech, among the many bred by the war, and it may not be amiss to pin it down at the very start. This new odd-sounding and queer-looking word is "didonk," and this is its genesis:

As we have a way of accosting a person with "Say!" so the Frenchman opens up with *"Dis donc"*, or "Tell me, anyway." (*Dis* is pronounced "dee".) Our soldier-boys, it seems, have grown very fond of their Gallic comrades and have fastened this recurrent phrase upon them as a pet name, and now speak of them affectionately as the dindonks.

By the way, who will tells us the meaning or origin of *piu-piu?* How comes the reduplication?

PRACTICAL PREVENTIVE DENTISTRY

The attention to the teeth is not a vogue of society nor an effort to maintain good appearance. While dentistry has a feature of esthetics, its larger, and its main claim is one of necessity. There has been evolved, during the fifty-one years of the development of the present practice of the dental profession, the system now termed "efficiency dentistry." A patient can, by periodical visits to the dentist, minimize the decay of the teeth approaching the zero point. The dentist, at each periodical visit of the patient, examines the teeth, to discover the presence of unsoundness, and, if a cavity is found, he fills it—the only known way of stopping dental caries. Such a discovery is, of course, made long before the decay would be advanced enough to cause the patient to notice it because of any pain.

Sometimes patients complain of lassitude and lack of energy, but, of course, do not attribute it to the slight sensitiveness of a small cavity in a tooth, for, at this stage, the cavity often is in between the teeth and not observable except to a dentist. The average patient does not complain until a tooth aches and the decay has reached the sensitive nerve-pulp. During the entire progress of a decay in a tooth, from the time of the first softening of the enamel until the cavity has enlarged and deepened and it starts to ache, an increasing irritability is being developed, until the pain in the tooth announces to the patient the true cause. During this time, the patient, if not in touch with a dentist, often resorts to sedatives; which, of course, do not rectify the cause in the least and only complicate the condition. By following the system of "efficiency dentistry," the decay is discovered by the dentist long before it reaches the disease climax form of an aching tooth, so that the fillings are very small and consequently, the teeth remain strong and efficient.

Patients who, upon advice of their dentist, faithfully followed this principle of efficiency dentistry have very few filled teeth and should never have a toothache. They should, likewise, always be at high efficiency as far as their teeth are concerned.

The basic idea of disease prevention has found favor in industrial institutions, where human health and the energy of the operatives has so much to do with the material output. Industrial plants employing large numbers of men and women have recognized the idea of health maintenance, by installing medical rooms with doctors in charge, recreation- and reading-rooms with easy chairs and books and periodicals, gymnasiums, roof-gardens, billiard-rooms, summer outing-houses, adeqate heating, ventilating and lighting plants, et cetera, and the operatives have organized baseball teams, card-clubs, singing societies, and amateur theatricals; also, talks and lectures are furnished on salesmanship and

shop procedure. However, dentistry has been left to the individual, and the diseased tooth is attended to only when the ache or pain comes. The dentist eventually gets the patient, but, what about conserving the energy of the patient in the meantime? The dentist is consulted so late and the decay has gone so far that it means either a large filling, the extraction of the tooth or a restoration of some kind, such as an artificial tooth, a crown or bridgework. This calamity—which it is—is avoided by preventive dentistry, while, incidentally, the individual's nerve-energy for work is conserved.

Many large concerns have eventually installed dental offices, with dentists in attendance, whose business it is to care for any dental disabilities that might interrupt the continuity of business operations.

The work of the industrial dentist consists in periodically examining every patient in the plant, indicating on a card the dental work needed and checking the work after the patient has had it performed by his or her family dentist. In this way, the industrial dental clinic-manager discovers the decay and has it attended to by the family dentist or takes care of it himself.

Is it not possible that more business concerns would adopt this method of conserving the health and of increasing the efficiency of their employees if the real value of this work as an efficiency agent were better understood? It would be good business even for concerns employing only a few people. In fact, it could very profitably be carried into the service department of domestic life. It should be a matter of great satisfaction to know that one's servants are free from infectious dental as well as other diseases that might make them a menace, rather than desirably efficient.

ALFRED C. CROCKER.

Cincinnati, O.

AN UNUSUAL SMALLPOX REINFECTION

On the 18th of February, I was informed by the attending physician that a case of chickenpox he had been treating for fourteen days (sic!) seemed to develop into smallpox. I visited the patient and found that he had the "real thing." On the 21st of that month, his grandmother, in the same house, had all the prodromals of the same disease and after twenty-four hours began to "break out". The pustules, although not numerous, were of the well-defined type. Both got well and disinfection and fumigation were completed. On the 7th of March, the same physician called me again in consultation. The grandmother had been ailing of vomiting, high fever (104° F.), and severe backache. Next morning, she had a "breaking out," which a little later proved to be again real 18-carat smallpox, without any possibility of error in diagnosis.

On the 1st of April, a man came to my office with a well-defined case of smallpox. When I told him what it was, he said that it could not be; that he had used several bottles of Mile's nervine and "broke out" like this before, and that another physician told him it was a dermatitis medicamentorum bromi. And, true, the lesions of a week ago were there yet. But, they were only "forget-me-nots", and the present ones were the true "roses, tulips, hyacinths", and all such further blooming flowers as there are found in the garden of smallpox.

In my 44 years of practice I never saw a Caucasian affected this way, although I did see this thing in British India in Hindus, and in Java in Malays. Has anyone else had this experience?

D. A. ZWIGTMAN.

Niles, Mich.

DICHLORAMINE-T IS THE THING

The greatest of all drugs upon which doctors agree
Is now known as Dichloramine-T.
A war product, an asset to the nation,
Whereby many useful lives are saved for procreation.
Upon infection, it has shed a new light—
Bacteria, pus, and "corruption," all take flight.
Iodoform, Peru balsam, bismuth paste are past,
Dichloramine-T has swept them like a blast.
Mustard, ichthyol, slippery-elm saw their fate,
Since Dichloramine-T was declared the up-to-date.
Use Dichloramine-T—patients delight in its revel
And will get well in spite of "corruption" or the devil.

W. J. T.

North Carolina.

SOME USES OF LIQUID PARAFFIN

Liquid vaseline, white oil, medicinal oil, liquid paraffin—to mention some of the many names this mineral oil goes by, has

been used for some time, as everyone knows, as the remedy *par excellence* for chronic constipation. However, many practitioners may be ignorant of the other uses to which this substance may be put. The following are some of the most common:

1. As an eye-wash in acute conjunctivitis and after the extraction of foreign bodies from the cornea, burns of the cornea, blepharitis, and so forth.

2. As an injection for gonorrhea in the acute stage, to allay the extreme irritation of the urethra.

3. For urethritis, for allaying congestion of the uterus, to tampon the vagina with cotton impregnated with a mixture of ichthyol and liquid paraffin (1 : 24).

4. For chronic suppurating wounds. Pack with gauze saturated with Morrison's mixture of

Bismuth subnitrate	oz. 1
Iodoform	oz. 3

Liquid paraffin enough to make a paste.

5. For burns use a mixture of zinc oxide and liquid paraffin, 1 : 24.

6. For intestinal antisepsis, as a laxative in typhoid fever, as a sedative for the pains of gastric ulcer. Mix 3 drams of bismuth subnitrate and 3 ounces of liquid paraffin, and give one tablespoonful three times daily.

7. For acute dermatitis apply a mixture of bismuth and liquid paraffin.

8. For painful piles, inject 2 ounces of liquid paraffin before and after defecation.

A. K. Moilliet.

Minatitlan, ver Mexico.

A PROGRAM FOR BETTER BABIES.

In the February number, Dr. C. M. Tinsman asks, "Do you not think that it is about time that the human family should begin to absorb a few commonsense ideas from some old rancher? Instead of filling up our magazines with articles advocating the raising of more babies, better fill them up with articles advocating the raising of better babies; by selection of better males and females to breed, etc." To which the editor replies, "Men and women can not be selected for breeding like cattle. We can not deal with ideal conditions, but must make the best of existing circumstances."

The consideration of this question is particularly opportune now; and it is for the medical profession to give to the people, collectively and individually, the vitally important instruction needed.

It is true that we can not select human parents like cattle, and yet we can use means to raise the ideals of men and women and so to educate them on hereditary influences that there will be a gradual improvement in the race. Unless we do this, degeneration must continue. The average woman has not yet so far lost her primitive instincts, in this respect, that she will choose an idiotic cripple as quickly as a stalwart man of wit, and, just as natural sexual selection produced the beautiful plumage and noble bearing of the male bird and the strength and nobility of the male horse and stag, so will the inculcation of better knowledge and higher ideals tend to raise the breed of men—without selecting them like cattle.

In a state of nature all animals tend to improvement by natural selection, whereas civilization tends to deteriorate the human stock, which makes it the more urgent that we should endeavor to counteract these influences. Wealth and position have, largely, become the incentives to selection instead of manhood and womanhood. The sickly and profligate young man is as likely to be selected by the average young woman, if he happens to have the accident of wealth by inheritance, as the more vigorous and nobler young man who happens to be poor. This tendency can be counteracted by education; and this is clearly the duty of the medical profession.

When we say that Johnie Jones is a boy of good breeding, everybody understands us to mean that he has had good home training—that his environment has been good. Every worthy parent recognizes the child's right to such "good breeding"—to the best home influences that can be supplied for him; and every civilized country in the world now furnishes every child an extension of the home training in the form of a common school education, so that he shall become the best member of society that such training can make of him. But, unless the child be well born, the best environment that can be furnished him, by home, church and school, can avail but little; to make an intelligent, efficient citizen of an idiot is a task as hopeless as to make a good sheep dog out of a common cur or a race horse of the foal of a peddler's nag.

Some hold that good breeding is altogether a matter of environment—that any

child with good home influences and a good education may become a good citizen and that genius is accidental, a thing entirely beyond our command. They point to the fact that our most eminent men and women, many of them, came of obscure parentage—that the Lincolns and Franklins and Edisons are as likely to come of the humblest parentage as the Garfields, the Lincolns and the Franklins are unlikely to leave descendants above the average.

The dog and the horse are far more improvable by education than the sheep and the cow. You can improve a collie by training ten times more than the average cur. To say that the ancestry of a child is of no importance is as unreasonable as to say that the ancestry of a horse or a dog is of no importance. Environment means so much that heredity seems to mean little, but, none of us has so little faith in heredity that if we were about to adopt a child we should ask no questions about his antecedents. In fact, we know that it is at least as important to improve the human breed as to improve our live stock. What we need is, not so much a fuller realization of the importance and of the possibility of doing this, as, a definite program for beginning the introduction of the superman; and what more opportune time than the close of the old regime that produced the race that could institute such a hell upon earth as the present war?

No stock breeder proceeds on the theory that a "sport," a reversion, or variant, from ancestry, is as likely to occur as a true descendant, yet, we proceed as though good breeding were solely a matter of good environment. The case of Shakespeare is commonly quoted by those who pretend to believe that genius must be a matter of chance, or, at least, a product of some accidental combination of circumstances over which we need attempt no control. We know so little of the history of this greatest genius of all time, that the case is unfavorable as an example of how the principles of heredity as well as the influences of environment might be used for the betterment of our race, yet even this case is instructive. His mother was a woman of unusual intelligence and had a decided taste for the drama, which she found an opportunity to gratify by the family's moving to Stratford, a short time before his birth.

The ideal has a much larger scope in the development of a better breed in the human than in the lower animals. There are many ways in which the ideal of nobility, of physical and mental manhood and womanhood can be raised, but, the most efficient would be, the adoption of a standard and the stimulation of effort for the production of better babies. By way of suggesting the initiation of a system for doing just what Doctor Tinsman has proposed, some such system as this might be adopted by legislation, in one of our progressive states:

Let a properly qualified physician be appointed who will go from place to place in the state and lecture to parents on the conditions needed for the best rearing of children, prenatal and postnatal. Let every health officer be required to get from the obstetrician in every case of birth a full statement of the development of the child, including hereditary taints and apparent predisposition to disease, for record. Let each child be examined once a year and the condition reported. Let physicians be required to report all cases of venereal disease. This examining and reporting should be continued through life and the records should be as easily accessible as real estate records. Many fathers would probably object to the adoption of such a system for themselves, but, none should hesitate to secure the benefit of it for their children.

Illinois, New York and several other states have a special instructor in infantile paralysis, whose duty it is to hold clinics throughout the state instructing physicians and parents on the treatment needed by victims of this disease and its prevention. There can be no doubt that this is a wise use of public funds. Such a system as I am suggesting would save the state millions in a few years, by reducing crime, insanity, vagrancy and disease in general. There should be no delay in adopting it.

THOMAS J. ALLEN.

Eureka Springs, Ark.

THE HOME INFLUENCE

We went to the movies the other evening. Not that this is so very exceptional an occurrence, but, this particular instance stands out as an occasion when a picture was presented the action of which made one think.

The hero of the picture is a young man, the son of the owner of a string of de-

partment stores all over the country. Wife and daughter are social climbers, and son has gratified their aspirations by becoming engaged to a girl, a member of an old "aristocratic" family—whatever that may mean in our democratic country. The girl, however, evidently has entered into this arrangement under pressure, being dependent upon the good will of a wealthy aunt. She resents being "sold" to a son of the vulgar rich and is studiously indifferent, even rude to him and his family. When a yacht trip is arranged for her, her fiancé, Preston, refuses to join the party, and remains at home chewing the bitter cud of his reflections. Then things begin to happen.

Some time before, Preston had noticed, at the perfumery counter of his father's store, a pretty young girl who always seemed either very sad and unhappy or much dissatisfied with her lot. She and a neighbor's girl working at the same counter are shown on the screen to bring out the actual problem of the play. Linny, the sad girl, has a father who was injured in an industrial accident and is now a hopeless invalid, paralyzed, almost imbecile, requiring constant care that is not always pleasant. For instance, he slobbers while being fed. This may be accepted as a minor accident in a little baby; in a grown person, it easily becomes tragic. Linny's mother, one of the hustling kind, has forgotten that there is such a thing as happiness and ease. She is never seen with her sleeves turned down, never idle or resting; yet, her house is neither tidy nor cosy. The son, bitter, dissatisfied, has imbibed anarchistic views and is revolutionary in his hatred of the upper classes. He is a draftsman, a hard worker, and, in his way, very fond of his sister Linny. Altogether, it is not a happy home where Linny lives. The other girl, Mabel by name, is the daughter of a policeman living across the way. Her mother, stout, bustling, cheerful, keeps her little family happy and contented. While she has not time for much petting and fussing, her cheery greeting when the daughter returns is in sharp contrast with the sulky reception that Linny meets on her return from the store. Mabel's sweetheart, Dennis, is accepted by the parents as her suitor and, altogether, in this household everything is lovely.

While Preston is alone in town, he decides to have a good time. But, the manner in which he goes about to get it is unusual. Chancing to see Linny while he is passing through the store he goes up to her counter and asks bruskly, "Have you ever had a good time?" then beats it. But, he waits for the girl outside, with his car. He pleads with her to let him take her out riding, and, arrived in the park, he begs her to let him give her the best time she ever had, every evening during the entire week. She is to decide each evening what she wants to do, and the only return he wants is, that she should enjoy herself hugely. Wait a minute, you blasé movies' fans! He does not give a knowing wink aside; he does not look wickedly and secretly pleased, manifestly anticipating the later accomplishment of his malign purpose, the ruin of this pretty, innocent girl. For a strange change, this young chap actually wants only to give the girl a rattling good time.

Impossible? My dear sir, or madam, is it impossible for young people to be together, very good friends indeed, without offending against moral precepts, even if the *covenances* may not be observed strictly? Is every young man a rotter, every young girl a possible vampire or willing victim of man's depraved sex-appetite? It makes little difference what the current run of vicious movies' pictures depicts, there are clean stories just as there are clean lives. It matters not what the Valescas, the Clara Kimball Youngs, the Dorothy Daltons and other actresses of the vampire type show, as long as we can have clean stories, entirely free from all suggestiveness, like those in which Mary Pickford, Marguerite Clark, and many other favorites play. And, the funny thing is, that these clean shows draw far greater crowds than those where the sign "Children Not Admitted" is so brazenly exhibited: and which insist on depicting the worst phases of life. Oh, of course, as "horrible examples." However, we digress.

Preston presses upon Linny a roll of bills, quieting her reluctance to accept them by assuring her that often he spends more for a single evening's entertainment, and she is going to give him six long joyous evenings. The girl evidently is to spend the money for pretty dresses, for, the next evening she comes out with a lot of boxes and packages. Now, the question arises. Where shall she dress? And Preston solves the difficulty by taking

Linny to his house and leading her to his mother's room, where she changes into her fine feathers. Then they start out on their adventure.

One evening the show, the next evening a cabaret, then a fine restaurant, and so on for the rest of the week until the last evening. Then Linny says that she just wants to pretend that she lives in this fine big house and owns all the beautiful and wonderful things that her poor little starved soul so greatly craves. But, poor Cinderella has not been able to pass five long evenings with Preston, being treated by him with consideration and deference, not being asked for any return, not even for a kiss, without falling in love with him. She is restless and unhappy and, finally the unhappy truth comes out: "You have been so good to me and now you are my whole life—I cannot go back to the old things; I cannot." Preston is thunderstruck. He realizes, too late, that he has not dealt fairly by this girl, who is a good girl. That he has aroused wishes and desires in her which cannot be gratified. Even when she leans against him in her grief, wanting to be comforted in his arms, he hesitates; but, finally he kisses her.

Every night, when Preston brought back Linny to her house, in his car, the neighbor policeman on his night beat has seen them. After four nights running, he takes the number of the car, and gives it to Linny's brother, whom he happens to meet. But, Linny had told her mother that she had an opportunity to do some night work, thus explaining her unusual absences from home; and the mother "needed the money," so, Linny was permitted to be out late. Now her brother confronted her with the damning fact of her being brought home in an expensive car. However, she counters by saying that she is doing work for Preston's mother, Mrs. Winfield, and is taken home by the chauffeur. Chancing, however, to read in an evening paper of the arrival of the Winfield party at Palm Beach, the brother suspects the worst and investigates, invading the Winfield house. He looks into the window just as Preston kisses his sister while she is held close in his arms. What else can he think but that she has been ruined by Preston? Furious, he leaps into the room, and there ensues a bitter fist-fight between the two young men, in which Preston prevails.

Unfortunately, at that very juncture, the family return home, and the fat is in the fire. The engagement with the haughty young aristocrat is broken off, Preston is exiled by his father to the Chicago store, to work out his salvation. Poor Linny is not believed at home, but, is suspected of the worst. She finds out that her brother prepares to shoot Preston and overhears her mother insisting that he should give up this plan, because she means to levy blood-money on Preston's father, to pay for Linny's shame. In desperation, the girl escapes and wanders aimlessly for hours through the streets, when finally, in front of a brightly lighted restaurant, she sees Preston's well-known car. She hides nearby, and soon Preston is seen coming out of the place, listless, and drives off. Linny runs to meet the car; Preston fails to see her in time; she is run over; is taken to the hospital; and there she dies, after taking leave of the inconsolable Preston.

While, before her adventure with Preston, Linny always had been listless, dissatisfied in the store, making few sales and getting scant wages, when at home the unfriendly atmosphere had been oppressive, she, during those wonderful days, was bright and cheerful, her friendly and happy face attracted customers and she was slated for advancement, even the home surrounding no longer being able to dampen her freshened spirits. After the awful encounter between Preston and her brother and under the clearly expressed suspicion of wrong doing, Linny fell back into her indifferent ways; customers turned their backs upon her and dismissal stared her in the face.

Against this, there is her friend Mabel with her happy home. She is cheerful, bright, friendly. Not nearly as pretty as Linny, she is far more attractive (except during the brief interlude with Preston), a successful saleswoman, and will make a contented wife and mother.

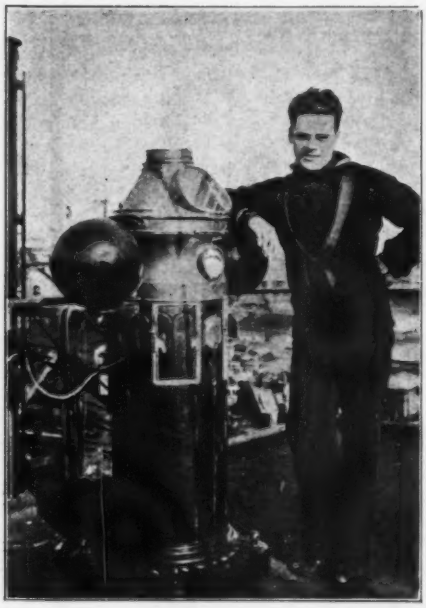
The Moral: It is the influence of home-life that makes or mars many lives, not only of girls, but, also, of boys.

In the World War

AN IMPERATIVE APPEAL FOR MEDICAL OFFICERS

An urgent and imperative appeal has just been issued by the Surgeon-General of the United States Army, for doctors for the Medical Reseve Corps.

There are today 15,174 officers of the Medical Reserve Corps on active duty, and the Medical Department has reached the



One of Our Own Boys in the Aero Service.

limit of medical officers at the present time available for assignment. With these facts before the medical profession of this country, we believe that every doctor between the age of 21 and 55 years who is physically qualified for service, will come forward now and apply for a commission in the Medical Reserve Corps.

The Surgeon General says: "So far, the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or fighting, phase, which will make enormous demands upon the resources of the country." The conservation of these resources, especially that of man-power, depends entirely upon an adequate medical service. Drafts of men will continually follow drafts, each of which will require its proportionate number of medical officers, and there are at this time on the available list of the Medical Reserve Corps an insufficient number to meet the demands of these drafts.

The real necessity for the complete mobilization of the entire profession is imperative. It is not a question of a few hundred men volunteering for service, but, of the mobilization of the profession for the conservation of the resources of this country. Let every doctor who reads this editorial and appeal from the Surgeon-General, which appeal is based upon dire necessity, act promptly and present his application for a commission in the Medical Reserve Corps at the nearest Medical Examining Board. If you are not informed of the location of your Board, the editor of this journal will advise you.

"STAND BEHIND THE BOYS"

How many doctors have applied this now very expressive phrase to themselves? There is nothing that puts more heart and gives so much confidence to a soldier in the thick of a fight than the thought that if he

Laundry Work—Very Personal.

does suffer a casualty, he will receive proper medical care and attention. What are you doing in this respect?

There are many boys, sons of your patients or friends, who have been or will be called into the service, and what a source of consolation it would be to the parents to know that possibly their own doctor might be the one to look after their boy, and they will welcome your acceptance of a

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A French Red Cross Station in a Sylvan Setting.

commission in the Medical Reserve Corps and compliment you for so doing.

The opportunity for you to do the most good in a professional way to the greatest number of people is, to offer your service to your country through the Medical Reserve Corps. Do not think longer about it, but, apply at once to your nearest Medical Examining Board, and if you are not informed of its locality, the editor of this journal will supply the necessary information.

Stand by our boys, your boys, their boys! Remember the gallant French in '76. The British who stood by Dewey in 1898. The Garibaldis who were always for LIBERTY.

The rapid expansion of the Army calls for a largely expanded Medical Reserve Corps. The Surgeon-General has issued a most earnest appeal for doctors. The Department has reached the limit of medical officers available for assignment. Apply for a commission today.

BOOKS FOR MEDICAL OFFICERS IN FRANCE

Within two days, we have received two appeals from members of the M. R. C., now serving in France, who informed us that they stand in great need of recent, up to date, and authoritative books far more than of the ordinary comforts and little luxuries that the homefolks like to send to their soldier sons, brothers, cousins, and friends, and many of which can now be bought in the canteens and other places.

They tell us that, owing to regulations, it has been impossible for the medical officers to carry medical books in their equipment and request that books of this nature be donated to the hospital-libraries abroad that already are in existence or are to be established.

Now, here is a suggestion. The need of our colleagues in France is particularly for the latest and best books on diagnosis, immunology, surgical treatment, preventive medicine. It will not do for any of us to hand out our own discarded old books—the very latest and best, only, are good enough and acceptable. So, let us pitch in and contribute a dollar or two apiece—if anybody insists upon giving more, he will not be blackballed. Then let us invest this money in those books that are called for; and there is no doubt but that the publish-

ers will be quite willing to furnish them at rock-bottom prices.

These books are to be sent to the hospital-libraries rather than to individual officers, for, by so doing, the benefit will accrue to a greater number of medical men and, indirectly, patients than would be the case if

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the books in question were sent to individuals. Our over-seas fund will be employed for this service as far as possible. Do you want to enlarge it, doctor?—Do!

HYDROGEN DIOXIDE AND ICHTHYOL FOR WOUNDS AND BLEEDING

Here is a suggestion that seems worth trying out in comparison with the numerous other remedies in vogue for the treatment of wounds; for, while the latest chlorine compounds at present are in the ascendency, there presumably are circumstances—nature and location of a lesion and the individual constitution—in which one or other application, singly or in conjunction with something else, may prove superior or more desirable, not forgetting the question of availability or cost.

Reference here is to a short note published by Dr. J. Hundshausen, in the *Muenchener Medizinische Wochenschrift*, in which, briefly, he speaks enthusiastically about the virtues of a combination of solution of hydrogen dioxide and ichthyol, suitably diluted, and ordinarily in the following proportions: Commercial 3-per cent solution of hydrogen dioxide, 8 ounces: water, 8 ounces; mix, then dissolve in it, *without shaking*, 2 ounces of ichthyol-ammonium.

"This mixture," the author continues, "is a decided improvement upon plain peroxide solution, and it not alone splendidly promotes healing, but, also is a hemostatic, even remarkably so in epistaxis. Whether this liquid be sprayed or poured upon the wound or it is applied by means of compresses (cotton), one hardly can expect to see healing to proceed more beautifully than under the circumstances. There is very little noticeable frothing; evidence of hard-

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ly any oxygen being lost. (Of course, the liquid must not be agitated). In fine, no one who once has given this application a trial ever will return to pheol, or carbolic acid, for treating wounds."

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

[*Continued from May issue, page* 402.]

I learn from such books as I have quoted from about as much about handling and treating sick people as I do from my medical books. How many doctors are there who are wise and unselfish enough to send a tired-out, overworked business man away for a long vacation, as this doctor did? There is too much of I-need-the-money spirit in present-day practice.

Here is a brief opinion of the young doctor across which I ran in "The Egotistical I," by Ellen Wilkins Tompkins:

"When Sellers did arrive, he proved himself a tyrant and painstaking enough to satisfy the critical eyes of Anne Senior. She only knows him slightly and prefers an older man, but, my old doctor of the lindens died a year ago and I have been clever enough not to get sick since that time. Of course, Sellers said it would have been better had I given up immediately. I expected this. It goes with the stock saying, 'The appendix burst the instant it was removed.' There are certain things that you learn intuitively, and one is, that a young doctor is a weighty individual and needs careful handling. I say, with bated breath, there is a deal to learn and unlearn in medicine. Sellers was tremendously in earnest and attacked my case in words four syllables long. After he had blown off his first steam, I said to him witheringly, 'I had no idea you were such a bully.'"

—

But, next to the doctor of the old school in "Beside the Bonnie Briar Bush," I have read nothing that presents the ideal physician so well as does the chapter on Doctor North in "Adventures in Contentment," by David Grayson. This book is well worth reading, and especially the entire chapter about Doctor North. I quote only a portion of it:

"So, Doctor North left his secret mark upon the neighborhood—as all of us do, for good or ill, upon our neighborhoods, in accordance with the strength of that character that abides within us. For a long time, I did not know that it was he, though it was not difficult to see that some strong good man had often passed this way. I saw the mystic sign of him deep-lettered in the hearthstone of a home; I heard it speaking bravely from the weak lips of a friend; it is carved in the plastic heart of a boy. No, I do not doubt the immortalities of the soul; in this community, which I have come to love so much, dwell more than one of John North's immortalities—and will continue to dwell. I, too, live more deeply because John North was here.

".....I heard again the stories of how he drove the country roads, winter and summer, how he had seen most of the population into the world and had held the hands of many who went out! It was the plain, hard life of a country doctor, and, yet, it seemed to rise in our community like some great tree, its root deep buried in the soil of our common life, its branches close to the sky. To those accustomed to the outward excitements of city life, it would seem barren and uneventful. It was significant that the talk was not so much of what the Doctor did as of *how* he did it, not so much of his actions as of the natural expression of his character. And, when we come to think of it, goodness is uneventful. It does not flash, it glows. It is deep, quiet, and very simple. It passes not with oratory, it is commonly foreign to riches, nor does it often sit in the places of the mighty, but, may be felt in the touch of the friendly hand or the look of a kindly eye.

"Outwardly John North often gave the impression of brusqueness. Many a woman going to him for the first time and until she learned that he was in reality as gentle as a girl was frightened by his manner. The country is full of stories of such encounters. We laugh yet over the adventure of

a woman who formerly came to spend her summers here. She dressed very beautifully, and was 'nervous.' One day she went to call on the Doctor. He made a careful examination and asked many questions. Finally he said, with portentous solemnity:

"'Madam, you're suffering from a very common complaint.' The Doctor paused, then continued impressively:

"'You haven't enough work to do. This is what I would advise. Go home, discharge your servants, do your own cooking, wash your own clothes, and make your own beds. You'll get well.'

"She is reported to have been much offended, and, yet, today there was a wreath of white roses in Doctor North's room sent from the city by that woman.

"If he really hated anything in this world, the Doctor hated whimperers. He had a deep sense of the purpose and need of punishment, and he despised those who fled from wholesome discipline. A young fellow once went to the Doctor—so the story goes—and asked for something to stop the pain.

"'Stop it!' exclaimed the Doctor; 'why, it's good for you. You've done wrong, haven't you? Well, you're being punished: take it like a man. There's nothing more wholesome than good honest pain.'

"And, yet, how much pain he alleviated in this community—in forty years!

"The deep sense that a man should stand up to his fate was one of the keynotes of his character; and the way he taught it, not only by word, but, by every action of his life, put heart into many a weak man and woman. Mrs. Patterson, a friend of ours, tells of a reply she once had from the Doctor, to whom she had gone with a new trouble. After telling him about it, she said:

"'I've left it all with the Lord.'

"'You'd have done better,' said the Doctor, 'to keep it to yourself. Trouble is for your discipline; the Lord doesn't need it.'

"It was out of his wisdom that he was always telling people what they knew, deep down in their hearts, to be true. It sometimes hurt at first, but, sooner or later, if the man had a spark of real manhood in him, he came back and gave the Doctor an abiding affection.

"There were those who, though they loved him, called him intolerant. I never could look at it that way. He *did* have the only kind of intolerance that is at all tolerable, and that is the intolerance of intolerance. He always set himself with vigor against that unreason and lack of sympathy which are the essence of intolerance; and, yet, there was a rock of conviction on many subjects behind which he could not be driven. It was not intolerance; it was with him a reasoned certainty of belief. He had a phrase to express that not uncommon state of mind, in this age particularly, which is politely willing to yield its foothold within this universe to almost any reasoner who suggests some other universe, however shadowy, to stand upon. He called it 'a mush of concession.' He might have been wrong in his convictions, but, he, at least, never floundered in a 'mush of concession.' I heard him say once:

"'There are some things a man can't concede, and one is, that a man who has broken a law, like a man who has broken a leg, has got to suffer for it.'"

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In closing, I can not refrain from calling your attention to the following conversation between Emile Souvestre—author of "An Attic Philosopher"—and a doctor, which was written some seventy-five years ago. If the up to date doctor had some of the common sense and honesty of M. Lambert, Souvestre's physician, I believe that there would not be so many people going out after new cults of healing as there are today. There is too much commercialism in the practice of medicine, I was about to say, also, too much science and not enough of the humanities. But, I will not philosophize any more or express further opinion. I have been interested in this sketch, and I give it to you, hoping you will find it as interesting as I do:

"I was wakened by a hand taking mine, and opening my eyes, I recognized the Doctor. After having felt my pulse, he nodded his head, sat down at the foot of the bed, and looked at me, rubbing his nose with his snuffbox. I have since learned that this was a sign of satisfaction with the Doctor.

"'Well! so we wanted old Snubnose to carry us off?' said M. Lambert, in his half-joking, half-scolding way. 'What the deuce of a hurry we were in! It was necessary

to hold you back with both arms, at least!'

"'Then you had given me up, Doctor?' asked I, rather alarmed.

"'Not at all,' replied the old physician. 'We can't give up what we have not got; and I make it a rule never to have any hope. We are but instruments in the hands of Providence, and each of us should say, with Ambroise Paré, 'I tend him, God cures him.'

"'May He be blessed, then, as well as you', cried I; 'and may my health come back with the new year!'

"M. Lambert shrugged his shoulders.

"'Begin by asking yourself for it,' resumed he, bluntly. 'God has given it you, and it is your own sense, and not chance, that must keep it for you. One would think, to hear people talk, that sickness comes upon us like the rain or the sunshine, without one having a word to say in the matter. Before we complain of being ill, we should prove that we deserve to be well.'

"I was about to smile, but, the Doctor looked angry.

"'Ah, you think that I am joking,' resumed he, raising his voice; 'but, tell me, then, which of us gives his health the same attention that he gives to his business? Do you economize your strength as you economize your money? Do you avoid excess and imprudence in the one case with the same care as extravagance or foolish speculations in the other? Do you keep as regular accounts of your mode of living as you do of your income? Do you consider every evening what has been wholesome or unwholesome for you with the same care that you bring to the examination of your expenditure? You may smile; but, have you not brought this illness on yourself by a thousand indiscretions?'

"I began to protest against this and asked him to point out these indiscretions. The old doctor spread out his fingers and began to reckon upon them one by one.

"'*Primo,*' cried he, 'want of exercise. You live here like a mouse in a cheese, without air, motion or change. Consequently, the blood circulates badly, the fluids thicken, the muscles, being inactive, do not claim their share of nutrition, the stomach flags, and the brain grows weary.

"'*Secundo,* irregular food. Caprice is your cook; your stomach a slave who must accept what you give it, but, presently takes a sullen revenge, like all slaves.

"'*Tertio,* sitting up late. Instead of using the night for sleep, you spend it in reading; your bedstead is a bookcase, your pillows a desk! At the time when the wearied brain asks for rest, you lead it through these nocturnal orgies, and you are surprised to find it worse for them the next day.

"'*Quarto,* luxurious habits. Shut up in your attic, you insensibly surround yourself with a thousand effeminate indulgences. You must have list for your door, a blind for your window, a carpet for your feet, an easychair stuffed with wool for your back, your fire lit at the first sign of cold, and a shade to your lamp; and, thanks to all these precautions, the least draught makes you catch cold, common chairs give you no rest, and you must wear spectacles to support the common light of day. You have thought you were acquiring comforts, and you only have contracted infirmities.

"'*Quinto,*

"'Ah! enough, enough, doctor!' cried I. 'Pray, do not carry your examination further; do not attach a sense of remorse to each of my pleasures.'

"The old doctor rubbed his nose with his snuffbox.

"'You see,' he said, more gently, and rising at the same time, 'you would escape the truth. You shrink from inquiry—a proof that you are guilty. *Habemus confitentem reum!* But, at least, my friend, do not go laying the blame on Time, like an old woman.'

"Thereupon he again felt my pulse and took his leave, declaring his function was at an end, and that the rest depended upon myself.

"When the doctor was gone, I set about reflecting upon what he had said. Although his words were too sweeping, they were not the less true, in the main. How often we accuse chance of an illness, the origin of which we should seek in ourselves! Perhaps it would have been wiser to let him finish the examination he had begun."

[*To be continued.*]

Among the Books

HARRISON: "TREATMENT OF SYPHILIS"

The Treatment of Syphilis: A Critical Review. By L. W. Harrison, D. S. O. New York: Oxford University Press. 1917. Price, $1.00.

This pamphlet of 70 large-octavo pages of text and over 3 pages of literary references presents an able discussion of the various remedies employed in the treatment of syphilis, the drugs successively taken up being arsenic, antimony, silver, mercury, iodine, sulphur, and iron compounds. As is but natural, the discussion of the arsenical compounds, including salvarsan and its congeners, occupies the principal space. In addition to the theoretical considerations, valuable practical suggestions are presented for the intravenous and other forms of administering the different remedies discussed. The pamphlet is useful for those interested in the treatment of syphilis, and can be warmly recommended.

DORLAND: "MEDICAL DICTIONARY"

The American Illustrated Medical Dictionary. Pronunciation, Derivation, and Definition. Including much collateral information of an encyclopedic character. By W. A. Newman Dorland, M. D. Ninth Edition, Revised and Enlarged. Philadelphia: The W. B. Saunders Company. 1917. Price $4.50.

Theoretically, a book should not be reviewed until the reviewer has familiarized himself with its contents by careful study. Only then is it possible to formulate a just opinion. As a matter of fact, such a desirable procedure is possible only in the case of relatively few new books, and reviewers as a rule must content themselves with discovering the author's main arguments, and the manner in which he supports them, in order to form an opinion as to the value of the new book.

However, in announcing a new edition of this medical dictionary, even though it be as well and favorably known as Dorland's, it seemed advisable to postpone discussion until the work had been subjected to continued consultation during a number of months. The result of the somewhat searching test has been that this new edition of the American Illustrated Medical Dictionary has not failed us (with one single exception) in any case in which its resources were laid under contribution.

The dictionary is well up in the newest medical terms, including those that have become current since the beginning of the war. Some new words we miss, but, they were not evolved until after the publication of the dictionary, so that no blame is attached. Moreover, the one exception mentioned above was that of a word that could not be found in any of the dozen or so medical and general dictionaries on our bookshelves, and ultimately was exposed as a typographical error.

Dorland's Medical Dictionary doubtlessly is one of the best, if not, indeed, standing at the very head. The arrangement and mechanical makeup are of such a nature as to make consultation easy. The definitions are acceptable, while the various minutiæ of spelling, derivation, capitalizing, and so on, are correct throughout. The illustrations undoubtedly add to its value. Altogether, the reviewer finds Dorland a never failing source of comfort in the rather strenuous demands that he makes upon it. Therefore, he does not hesitate to recommend it cordially to his brother physicians.

GREENWOOD: "SCOPOLAMINE-MORPHINE

Scopolamine-Morphine: Semi-Narcosis During Labor. By Wm. Osborne Greenwood, M. D., B. S. London: Oxford University Press. 1918. Price $2.00.

A pleasaing innovation in the title of this book is the omission of the objectionable term "twilight sleep"; scopolamine-morphine narcosis neither being an actual sleep nor can it be described by that ques-

tionable qualification twilight sleep; it is rather, as the author indicates, a semi-narcosis.

The author points out that no amount of criticism thus far bestowed upon this method of making labor easier can negative the excellent results that have hitherto been obtained, and that can be obtained. Much of this criticism has been based, as he points out, upon faulty or careless technic or upon preconceived adverse opinion. It appears conclusively from a study of the author's investigations, as laid down in this little book, that this method of inducing analgesia during labor possesses great possibilities and that in many instances it is much to be preferred to chloroform-narcosis, over which it possesses advantages with regard both to mother and child.

Doctor Greenwood's treatise shows much personal and original work and thanks are due him for the manner in which he has established the value and merits of the method under consideration. This, by the way, cannot hold claim to being designated as the "Freiburg method," since it had been largely employed in practice in the United States years before Gauss, in Freiburg, secured his peculiar notoriety.

MACLEOD: "BURNS"

Burns and Their Treatment: Including Dermatitis From High Explosives. By J. M. H. Macleod, M. A., M. R. London: Oxford University Press. 1918. Price $2.00.

The author confesses frankly that it was to extend his own knowledge on the treatment of burns and of dermatitis due to the making and handling of high explosives that the manuscript for the present book came to be written. He well describes the revolution which the treatment of burns has undergone during the last few years. The oldfashioned methods with greasy applications and occlusive dressings have given way to more rational and "open" methods of treatment, whereby dressings are largely avoided and the terrible ordeal of pain associated with their removal rapidly is becoming a thing of the past.

The various methods of treating burns are considered fairly and with sufficient detail to be serviceable to the practitioner. Instead of the simple classification into three degrees that is current in the United States, the author has adopted the classification of Dupuytren, who differentiates six degrees. This, though, is a detail that is of minor bearing. Of greater importance is the description of the various forms of burns, according to cause, namely, heat (moist and dry), electricity, lightning, x-rays, chemicals, et cetera. It is of interest to us that the treatment of burns by the open method, that is, under a natural scab and by the method of healing under an artificial scab, by the paraffin method, is strongly endorsed by the author. For moist dressings, he recommends the employment of the Carrel-Dakin method of treating wounds. Several chapters are supplemented by fairly complete literary references.

OTIS: "PULMONARY TUBERCULOSIS"

Pulmonary Tuberculosis: A Handbook for Students. By Edward O. Otis, M. D. Boston: W. M. Leonard. 1917.

This little manual of 206 pages of text is intended, primarily, for students of the third and fourth years, to be used in connection with clinical work. However, the general practitioner likewise will find it instructive and will derive from its study much sound advice and aid in the management of his tuberculous and consumptive patients.

The author stresses the important truth that it is not so much the tuberculosis, or consumption, that must be treated, as, rather the patient who is tuberculous or consumptive; the necessity of individualizing being greater, perhaps, in tuberculosis than in any other disease, for successful treatment.

As to the methods of treatment outlined by the author, they are those called "general" and symptomatic, since in his opinion, probably no specific ever will be discovered. This is very true, if it is considered that clinical tuberculous disease is far more than the result of an infection with the tubercle-bacillus; that it is, in the words of Richard Morton, "a consumption of all muscular parts of the body," the cause of which is complex. The peculiarity of this affection, through which every organ and every function of the body becomes impaired, is responsible for the need of careful individualization and of general methods of treat-

ment by which the general resistance and functioning-power of the organism is restored.

These methods of treatment are outlined in Doctor Otis' book in a manner that renders it a useful guide for the practitioner. The author's wide experience with tuberculous patients has enabled him to select the salient clinical features and the best methods of treatment in a highly acceptable manner and to give his book the personal and authoritative touch that can come only from intimate knowledge.

PAGE: "AVIATION-ENGINES"

Aviation-Engines: Their Design, Construction, Operation and Repair. By Lieut. Victor W. Pagé, A. A. A. C., U. S. R. New York: The Norman W. Henley Publishing Company. 1918. Price $3.00.

Physicians who are attached to the Aero Service of the United States Army, naturally, must be interested in the construction of flying machines, and may find much serviceable information in the pages of this book.

WINSLOW: "PREVENTION OF DISEASE"

The Prevention of Disease: A Popular Treatise. By Kenelm Winslow, B. A. S., M. D. Illustrated. Philadelphia: The W. B. Saunders Company. 1916. Price $1.75.

This book is not a record of the progress in preventive medicine. It is a detailed practical guide for the layman, that he may avoid the various diseases described in it.

Since the inception of preventive medicine, by Jenner, in 1796, more than one hundred years passed before the impetus given by the originator of protective vaccination was taken up and developed further. However, during the opening of the present century, the occurrence of epidemics of typhoid fever was made preventable by protective vaccination according to Almroth Wright; the prevention of malaria and yellow-fever became possible through the researches, largely, of medical officers of the U. S. government services; so that actually a new era in the accomplishments and aims of medicine was opened up.

The author of this practical and popular treatise teaches conservation of health and prevention of disease, in a manner that is in keeping with actual knowledge and free from faddism. His book may well be given into the hands of intelligent laymen; but, it likewise may be read with profit by the physician himself, if he wishes to prepare himself for giving instruction in health-matters.

DYKE'S "AUTOMOBILE AND GASOLINE ENGINE ENCYCLOPEDIA"

Dyke's Automobile and Gasolin-Engine Encyclopedia. Seventh edition, revised and enlarged. Containing 515 charts, inserts, dictionary, index, and supplements on the Ford, Packard and on airplanes. Treating on the construction, operation, and repairing of automobiles and gasoline-engines. Also trucks, tractors, airplanes and motorcycles. By A. L. Dyke, E. E. St. Louis: A. L. Dyke, publisher. 1918. Price $3.50.

This latest issue of Mr. Dyke's "Automobile and Gasolin-Engine Encyclopedia" presents a further improvement over preceding publications of this enthusiastic automobile-expert. The book contains in encyclopedic form information on every question that may come up for solution or that the owner of a car may wish to have answered. It gives a guide for operating and taking care of the car and also enters into the matters of insurance, license, and laws as they refer to automobiles. Undoubtedly, a book like this must be welcomed by automobile owners and will repay frequent consultation.

BALLENGER AND WIPPERN: "EYE EAR, NOSE, AND THROAT"

Eye, Ear, Nose, and Throat: A Manual for Students and Practitioners. By Howard Charles Ballenger, M. D., and A. G. Wippern, M. D. New second edition, thoroughly revised. Illustrated with 180 engravings and 8 colored plates. Lea & Febiger. Philadelphia: 1917. Price $3.50.

This book offers an efficient guide for the treatment by the general practitioner of the special affections dealt with. It is necessary for the general practitioner to know when he may attend with safety to patients complaining of diseases of this nature, and when to refer them to specialists. The information presented will guide the general practitioner in deciding whether to treat or not to treat, and how to treat.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolise the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

ANSWER TO QUERY 6360.—"Aneurysm of Heart."—On the last page of CLINICAL MEDICINE, Query 6360, Dr. R. S. C., of Arkansas, asks for help in the treatment of aneurysm of aorta. I wish to call the Doctor's attention to Doctor Abrams' book, "Spondylotherapy," page 88 and in other places, as possibly suggesting a means for relieving his patient. The book is published by The Philopolis Press, Lincoln Building, San Francisco, California.

Personally, I have not had occasion to try this treatment, but, from good results obtained by percussion in other diseases, I am convinced it will prove helpful here, too.

C. S. COPE.

Detroit, Mich.

Queries

QUERY 6380.—"A Peculiar Case of Arsenical Poisoning." J. A. P., Minnesota, reports the case of C. P., male, age fifty-two, who, on October 14, last, took a teaspoonful of paris-green in water and then drank a pint of whisky. "The whisky kept him from complaining until about five hours after he took the poison so that, when seen, much of it had been absorbed. He was then in collapse, cold, pulseless, and was vomiting; the bowels also had moved. He was in a stupor. Later, anuria and anorexia set in, while vomiting continued for several days. There seemed, however, to be no pain. The skin was dry, with a papular eruption; panophthalmitis developed, with destruction of one eye. Almost constant delirium and talking irrationally has been present since a few days after the poisoning; that is, when he does not sleep. At first, the delirium was active. The man is now extremely emaciated, although he eats enough and has no trouble in digesting his food. Kidneys and bowels appear to be acting normally, and his appetite is good, but, he becomes more emaciated and still is delirious now six weeks after he took the poison."

Our correspondent wants to know the cause of the continued delirium and what treatment he can administer, although aware that the prognosis is, naturally, unfavorable.

Considering that this man took a teaspoonful of paris-green (copper acetoarsenite), followed this up with a pint of whisky, then remained five hours without treatment, we must concur in your prognosis and only can express our wonder at the fact that the man still is alive today. There can be little doubt that the coma and delirium may be regarded as arsenical encephalopathy, such cerebral manifestations, together with neuroretinitis, convulsions, hemiplegia, amaurosis, hysteria, and insanity, having been reported as occurring, not alone in lead-poisoning, but, in arsenic-poisoning as well. As you are aware, if a large amount of arsenic is absorbed, the anterior horns of the spinal cord are affected.

In this case, you have the typical anemia, loss of flesh and strength, and cerebral symptoms; however, you do not mention the existence of paralysis and general neuritis; we, naturally, should expect more or less pronounced cutaneous symptoms, besides, also, the presence of albumin and casts, with perhaps traces of blood, in the urine. A thorough analysis of the latter

and a careful examination of the blood ought to prove interesting.

Frankly, we can not see that very much can be done, beyond trying to hasten elimination of the arsenic by the use of potassium iodide and purgatives, to allay gastrointestinal irritation, and to maintain nutrition in every possible way.

Personally, we should be inclined to put the patient in wet packs every two or three days, wash out the bowel frequently, and give large quantities of some such demulcent beverage as barley-water. Milk and fatty foods, of course, should not be allowed.

We hope that you will keep us informed of the progress of this case.

QUERY 6381.—"Miners' Pink Eye." R. R. S., Oklahoma, writes: "Please tell me how to treat what the miners in lead and zinc mines call pink-eye. The trouble comes quickly to those working underneath the ground, and some of the mines are worse than others. The conjunctivas become congested and photophobia is marked; the pupils are small, but, respond to light; there is inability to raise the eyelids and a feeling of sand in the eye; there is a very slight pus formation. Would suprarenal extract be of use?"

The condition you have to deal with—that is, in the case of miners working in lead and zinc mines—is a somewhat peculiar one. However, we believe, that it will yield most readily if borated petrolatum be applied to the conjunctival sac, after irrigation with some such solution as this: Boric acid, grs. 10; zinc sulphocarbolate, grs. 2; hydrastine hydrochloride, gr. 1-50; distilled water, ozs. 2. We should be a little cautious about using suprarenal extract.

However, we are inclined to believe that those subject to this peculiar form of conjunctival congestion would suffer infinitely less if a small quantity of borated petrolatum were inserted into their eyes before their entering the mine or, at least, at the first sign of irritation. We assume, from the facts presented, that the men's eyes are not protected.

QUERY 6382.—"Treatment of Epithelioma with Arsenical Paste." W. M. B., Idaho, wishes to know (1) how he may tell, after using Marsden's paste on an epithelioma on the face, that it has killed the growth; (2) the best method of after-treatment; (3) how soon the wound should heal; (4) whether a second application of the paste should be made if the first seems not to have been effectual, and, if so, how soon?

It is impossible to judge whether one application of Marsden's paste or any arsenical paste will thoroughly destroy epithelioma. However, in the ordinary form of epithelioma of the face, the tendency is, to spread horizontally, so that it is well to initiate treatment by curetting the edges with a sharp spoon, thus preparing the way for the application of the caustic. The paste should then be packed into the wounds made by the curet and care taken to have it penetrated deeply beneath the skin, if the latter is undermined. If the ulcer is not over an inch in diameter, the paste may fill the space level with the skin. Should there be no cavity, a reasonably thick layer of paste is spread over the part to be destroyed and a much thinner layer spread over the surrounding skin for at least a fourth of an inch distant from the sore.

Some practitioners prefer to apply Marsden's paste on a piece of muslin or linen which has previously been carefully adapted to the affected area. The plaster should remain adherent for twelve, twenty-four or thirty-six hours, as may be indicated by the pain, intensity of reaction or the degree of destruction considered requisite. In all cases, the after-treatment consists in the application of soothing and antiphlogistic remedies.

As you are aware, arsenic exerts a selective influence upon epitheliomatous and other low-grade tissue and, if properly applied, Marsden's paste will almost invariably destroy superficial growths.

It is impossible to say just how long healing will take, but, under basilicon or similar ointment dressings, the slough becomes detached, as a rule, in a week or ten days. Healing, thereafter, progresses as in any ordinary ulcer. Occasionally, pinpoint skin grafts may be applied with advantage.

Bear in mind that arsenic works most satisfactorily upon ulcerating lesions and on cancers of the embryonal type; usually healing is complete in four or five weeks.

The present writer has been in the habit, upon removal of the plaster, of applying carefully prepared poultices or kaolin paste. After the slough separates, if any cancer-

ous tissue remains or if the hard nodular base or margin remain unaffected, a second application of the paste may be necessary. It is safe to state that, when all cancerous tissue has been destroyed, healing will occur without interruption under a simple dressing.

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QUERY 6383.—"Tired and Tender Feet." M. F., Michigan, asks what is the best remedy for tired and tender feet.

It is not an easy matter to prescribe offhand for tired and tender feet.

In the first place, so-called tired feet may be due to the existence of flat-foot, circulatory disturbance, malaria or a neurosis. The condition frequently is present in those of impaired vigor, especially after some such debilitating disease as influenza.

There is little question but that in obscure cases of long standing systemic treatment is necessary. In every case the condition of the body chemistry should be ascertained.

A well-fitting shoe should be worn and the patient change socks once or twice a day. It is a very excellent idea for him to have two pairs of shoes which should be worn on alternate days. The feet may be bathed, preferably in cold water, morning and night. It is an excellent plan to add a little alum; in most cases, epsom-salt solution, carbolated (epsom salts, oz. 1, water, qt. 1, carbolic acid, drops 10), more fully meets the requirements.

A dusting powder consisting of three parts salicylic acid, ten parts starch, and eighty-seven parts powdered soapstone, will check excessive perspiration and prevent chafing. Another very excellent formula is sodium salicylate, grs. 30, potassium permanganate, dr. 1, bismuth subnitrate, oz. 1 1-2, boric acid q. s. ad oz. 3, which should be dusted on the feet and into the socks every morning.

In simple cases, the patient should receive some such tonic as the triple arsenates with nuclein.

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QUERY 6384.—"Otitis, Otalgia." W. E. A., New York, wishes to know the most effective treatment for earache.

As you will readily understand, it is absolutely essential that the cause of otalgia be discovered and that treatment, to be effective, must be based upon an understanding of such basal conditions. As the years pass, the present writer is less and less inclined to employ oleaginous preparations, finding, in obscure cases, the instillation of a few drops of atropine or cocaine solution infinitely preferable. A 2-grains-to-the-ounce solution of atropine may be employed, while any solution of cocaine should not exceed 4 per cent.

The laity, as you may be aware, place a great deal of dependence upon the application of a hot baked onion. This may not appear to the scientific practician as a really useful procedure, still, in practice, it proves extremely efficacious, giving much better results, as a rule, than poultices.

A very good, generally applicable preparation for use in ordinary earaches consists of cocaine, grs. 6; tincture of opium, drs. 2; glycerin, drs. 2. A drop of this mixture on a small pledget of absorbent cotton should be placed in the auditory canal, preferably after thorough irrigation. Externally, that is, behind the ear and about the tragus, apply some such ointment as: Guaiacol, grs. 40; Methyl salicylate, grs. 40; menthol, grs. 3; and lanolin and petrolatum, equal parts to make oz. 1.

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QUERY 6385.—"Senile Incontinence." W. T., New Mexico, writes: "Very little is said in text-books about weakness of the bladder or sphincter in old people, causing difficulty to retain urine and frequent getting up, at night, to urinate. What is the best remedy for this condition, where the general health is otherwise good?"

As you are aware, incontinence of urine in the aged is generally the result of atony of the vesical sphincter. Small doses of hyoscyamine and strychnine valerate, cautiously alternated, in particularly stubborn cases, with sodium cantharidate, usually prove effective. Strychnine valerate, gr. 1-64 and hyoscyamine, gr. 1-250, may be given before dinner, supper and at bedtime, with cantharidin, gr. 1-5000, every hour for three doses before retiring. Be very sure, though, that there is no prostatic disorder.

Arbutin is regarded by many clinicians as virtually "specific" in senile incontinence; still, in many cases marked by atony of the vesical sphincter, the addition of strychnine and hyoscyamine is almost essential.

Delphinine is another drug which has been highly lauded by many competent ob-

servers. Delphinine acts upon the central nervous system. It should rarely—if ever—be used during the persistence of an acute inflammatory condition.

Some observers report that this alkaloid checks mucous, or mucopurulent discharges, and, that it exerts in a somewhat less degree a tonic influence upon the vesical mucosa and the kidneys. In full doses, it produces vomiting, giddiness, and convulsions. In reasonably full doses, it may act as a laxative; but, more often it promotes diuresis and occasions feelings of heat and tingling in various parts of the body.

The eclectics regard staphisagria (larkspur) as a remedy for chronic inflammation and atony of the renal and reproductive organs. Scudder, for instance, considers staphisagria a specific for irritation of the genitourinary apparatus, especially in chronic irritation of the neck of the bladder associated with temporary enlargement or irritation of the prostate. Locke says that it gives marked relief in urinary incontinence of old men, with vesical and prostatic irritation, frequent teasing or urgent desire to urinate. In our own hands, however, eupurpurin and arbutin, with small doses of berberine, have given better results in such conditions.

The usual dose of delphinine is 1-128 grain, every thirty to sixty minutes for a few doses, to effect, then every one to three hours, as may be required to maintain the impression. Bear in mind that individual susceptibility varies greatly. Patients receiving delphinine should be put on bland or mucilaginous beverages, as, barley-water.

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QUERY 6386.—"Sexual Neurasthenia?" J C. N., Tennessee, forwards a specimen of urine for examination, with the patient's own description of his symptoms, and asks diagnostic and therapeutic comment. The patient writes:

"I am thirty-one years old, weigh 137 pounds, 5 feet 10 inches high. Have been ailing for the last eight years. Have extreme tenderness over the region of the kidneys. Kidneys pain me all the time and back hurts all the time. Urine scanty and between times of urination the urethra pains and burns and before the first urination of a morning there is a thick yellow discharge. When lifting or straining hard, the testicles swell up and they will ache and have a burning sensation. Eyes are weak. Can't read long without getting headache. Have poor appetite. Am thin in flesh and ache all over all the time. When I walk or strain, the cords leading to the bladder on each side swell up and get awfully sore and seem to be as large as my little finger. When I sit or stoop over any length of time, my breast nearly kills me, pains and aches, and pains me so. I am short of breath, nervous, and irritable with myself and everybody else at times."

Examination of the urine reveals colon-bacilli, staphylococci, and a few streptococci, with other evidences of an infection of the genitourinary tract. Therefore, we certainly should administer an autogenous bacterin.

Unfortunately, this man would seem to have been reading "lost manhood" books or medical almanacs. In the first place, what "cords" are there "leading to the bladder" which "swell up and get awfully sore," and why should "sitting or stooping over" produce a pain in the breast, which "nearly kills" him? Were this writer in charge of this individual, he would suspect him very strongly of undesirable practices, and he believes that kindly cross-questioning will enable you to reach a diagnosis easily.

However, it is not fair for us, as physicians, to belittle offhand the many distresses that so-called neurasthenics suffer from, and it is a question whether we really are yet able to recognize clearly the symptoms of certain neuroses, which can render life miserable.

This man is of under-weight, undoubtedly has a vesiculitis and possibly an epididymitis, and, if you will examine the lower bowel, you may find quite an extensive pus-pocket or even a fistula. It would be an excellent plan to make a very thorough physical examination and send a specimen of the urethral discharge to a competent pathologist.

In the meantime, secure thorough elimination, give him a good reconstructant tonic, have him wear a suspensory bandage, pass sterile cold steel sounds every second or third day (increasing one size at each sitting); also, if you have a wall-plate, try spinal faradization, applying one pole over the pubes and perineum and the other over the sacral region. It may be necessary to treat locally an erosion in the deep urethra. It is essential to find out definitely the exact condition of the patient.